Is Pear Culture Profitable?

THIS is a question that can not be answered properly in a few words, yet we are over and over again requested to answer it within the limits of a brief letter. We propose, therefore, to devote a short chapter to the subject now, in order to avoid the necessity of frequent and unsatisfactory replies hereafter.

Looking at the question in the abstract, we can say, without the slightest hesitation, that Pear culture, for market, is profitable. Land of the finest quality for the purpose, situated in the finest fruit-growing districts of the United States, and of easy access to the best markets, can be purchased for *fifty to one hundred dollars per acre*—varying with the value of the improvements, in the way of buildings, condition of the land, contiguity to railway stations, &c. This is one great point settled,—good cheap land, in a favorable climate, and all desirable facilities for marketing the crops at any season of the year.

As to the prices of Pears, we need say but little; they are so high as to be the subject of general remark. In our most abundant Pear month of all the year, October, good Pears, such as *Virgalieus*, sell readily at Rochester, *in the orchard*, at five dollars per bushel, and in New York for nearly twice as much. A few days ago, Messrs. Curtis & Lincoln, of Boston, sent us a small box of *Easter Beurrés* which, as they stated, sell readily in Boston at two to five dollars per dozen. And it is well known that Pear-culture around Boston is, and has for years been, a sort of *speciality* with nearly every man who has land that Pear trees can be grown upon. Neither is it at all likely that prices will come down to a low figure in a great length of time; for the population, wealth, taste, and luxurious habits of living, are all increasing at such a rapid rate in every city, town, and village, in the country, that no moderate extension of culture can possibly keep pace.* Then it takes at least twelve or fifteen years to bring Pears on Pear stocks to that condition when their fruit may be taken into account. It is perfectly safe, therefore, to assume that Pear-culture is not only profitable at present, but is likely to remain so for—we can not say how long.

It is altogether unnecessary to enter into any calculations respecting the cost of establishing and keeping orchards, or the probable produce of trees at a given age. This has often been done already, and the results, however they might vary according to circumstances, have invariably been encouraging to the planter. Our principal

* Previous to 1850, the population of New York increased in five years, 144,405; Boston, 22,500; Philadelphia, in ten years, 150,725; Baltimore, in five years, 66,741; Brooklyn, in five years, 37,272; Williamsburg, in five years, 11,138. Between 1850 and 1855, the increase has undoubtedly been still greater in proportion. The interior cities and villages, as well as the rural districts, are increasing in population at an amazing rate. Cincinnati, in ten years, between 1840 and 1850, increased 72,000; and in the same period Milwaukie sprung up from 1,000 to 20,000, and Chicago from 4,000 to 30,000. See how new States grow up, like Minnesota and Kansas, in a few years, without a bearing fruit tree.

object now is to draw attention to certain causes which have already led to disappointment, and are likely to do so hereafter.

During the last seven or eight years, a large number of persons have engaged in pretty extensive experiments in growing Pears for market, without possessing the slightest degree of experience in either that or any kindred branch of cultivation; and that, too, without calling in the aid of any one having the requisite skill and experience, or of devoting to it their own personal care or direction. Engaged in some other pursuit, they have taken this up as a sort of speculation or investment, and have attempted to carry out their plans with such assistance as common field laborers are competent to give. It is scarcely possible that these persons could succeed in realizing their expectations, for although the culture of the Pear in our soil and climate is a very plain and simple matter, yet it can not be done on an extensive scale, in such a manner as to be satisfactory and profitable, except under good and skillful management. This is certain. There are various considerations that require to be well weighed and studied by one who has had experience. The soil must be suitable, the location eligible, varieties well adapted to the soil and other local circumstances, as well as to the markets for which they are grown. The trees must be properly planted, and afterwards pruned and trained, and the soil must be kept in good heart and good tilth about the trees. Insects have to be watched and destroyed; and a great variety of minor matters, accidents and incidents, must be encounterd and provided for.

A common laborer, who might be a capital spademan or plowman, and who might very well take care of a crop of Potatoes or Corn, is no more competent to direct the management of an extensive orchard of Pears, or any fruit trees, than he would be to conduct the machinery of one of the great cotton mills at Lowell. The planter may fancy that, being well read on the subject, he can in a short lecture make it all plain to his laborer; but he is mistaken. We know from experience that it is not an easy matter to make a good tree-cultivator with mere words, however explicit and forcible they may be. To plant a tree well, is an easy matter, no doubt. We know many amateurs who, by a little experience, have become most successful planters—their trees live if they have a spark of vitality left when planted; while we hear hundreds of people complain that they have "bad luck" in planting—their trees *die*, or they *don't grow*, or there is something wrong. Thousands of trees are annually lost through errors committed by inexperienced planters; and in most cases it would be impossible for any one to discover where the error was, unless by pulling up the trees. They may have been planted too deep—the roots placed out of the reach of the genial and exciting warmth of the atmosphere, there to remain dormant for a season, and finally die. They may have been planted too shallow, and thus too much exposed to the heat and dryness of the atmosphere, or to the action of frost in winter. The roots may have been huddled in, all curled and twisted in unnatural positions, and thus checked in their attempts to recover from the shock of removal; or they may have been bruised and broken when taken up, and these mangled and decaying parts allowed to remain, instead of being carefully removed with a sharp knife. The tops may have been branchy and full, while the roots were meagre and defective, and yet no pruning given to restore the necessary balance. Then there are a multitude of little points that would appear to be scarcely worthy of notice, yet by no means unimportant to the

future growth and vigor of the trees; but they can only be understood and appreciated after some degree of experience.

What we have said in regard to planting, applies with equal force to pruning. This must be done at the proper time and in a proper manner. A person who has not studied the nature and habits of a tree somewhat, is as likely to injure as improve its condition by the application of the knife. Only a few of those who profess to be gardeners, have learned to use their knife at once *wisely* and *well*. The head needs to be trained as well as the hand. The good pruner not only makes a clean, handsome, quick cut, but he cuts precisely what he should, and nothing more; and that, too, at the right time. We would greatly prefer to open the gates of our orchard, and let in a drove of cattle to browse on the branches, than allow such men to prune them as we have known to be entrusted with that duty.

Then again the cultivation and cropping of the ground requires good judgment, as well as great care. Some people suppose that if they grow root crops, or such as require clean and constant culture, among their trees, that it will be all right. And so it would be, if it were done in a proper manner. We are satisfied, however, that in a multitude of cases the young trees are so starved and stunted by allowing the intervening rows of root crops to encroach upon them, that they are permanently injured, if not ruined. We have known a very intelligent cultivator ruin an extensive young Pear orchard by cropping the spaces between the rows, with corn. He took the precaution to leave an open space of several feet on each side of the rows; yet the injury arising from exclusion of air, &c., was quite obvious in comparing the trees with others differently situated. We have seen others much injured by a crop of Carrots: a small space was left between the roots and the trees; yet the result was a rich harvest of Carrots, and stunted trees. Other rows of trees in the same plot, having no Carrots between, made a luxuriant growth. The fact is, these root crops gather food from a greater breadth of ground than people generally suppose; and when their feeders come into contact or rivalry with those of a fruit tree, they are sure to become successful usurpers. In this matter we speak not only from observation, but experience. We sometimes plant Strawberries among our specimen trees, in some cases allowing them to cover the ground; but during the drouth of last summer, and previous summers too, we found that where the Strawberries had taken root thickly over the roots of fruit trees, that the leaves of the trees fell prematurely, and the fruit failed to reach perfect maturity.

Our intention now is not to dwell upon these points minutely, or give any practical instructions, but to call attention to the necessity of skill and judgment in the direction of fruit tree plantations, and to warn those who are planting extensively, with a view to profit, against the dangerous notion that any smart laborer may manage their trees. We do not of course wish to be understood as arguing that every man who engages in the culture of fruit trees must possess experience; but unless he does, and can devote his time to it, then he should employ a *competent* assistant. Far better do this than lose his capital, and have the mortification of seeing his cherished project become a failure and a discouragement to himself and all who see it, and then to raise bitter complaints against this one and that one who deceived him, either by selling him bad trees or by giving him false counsel.

Biographical Sketches of Distinguished American Horticulturists.

THOMAS HOGG, Sen'r, of Yorkville, N. Y.

Another of the pioneers of American Horticulture is gone. For more than thirty years Mr. Hogg occupied a prominent place among the professional florists and nurserymen of the United States, and it would not be right were we to allow his death to pass unnoticed in this journal. We have deferred the announcement of his decease, for the purpose of accompanying it with a brief sketch of his useful, well-spent life.

The culture of exotic plants, and indeed all branches of horticulture, were at a low ebb when his labors in New York commenced; and he has contributed largely to their advancement. He was a man of superior intelligence, a good botanist, and a genuine, hearty lover of plants for their own sake. As a propagator of plants, he had no superior, to our knowledge, in this country. He was continually on the watch for the really fine new plants; and thus he always kept his collection fully up with the times.

He was a remarkably modest, unassuming man, and of an eminently charitable and generous turn of mind. In the frequent interviews we have had with him, during the last eighteen years, we do not remember hearing him utter a single vain, boastful expression, nor one word of an unkind, censorious nature, concerning any human being. He was ever to be found among his plants—interested, cheerful, and happy—ready to show and point out the qualities of his last new plant.

In his dealings with the trade, and with the community at large, Mr. Hogg has ever been regarded as one of the most upright and reliable men. During his long career, his name has never been connected with any of the clap-trap novelties with which the horticultural world has ever been so frequently duped. He possessed sound judgment and great caution, which, added to his spotless integrity, inspired that confidence which was so justly and so generally reposed in him.

Mr. Hogg was highly respected in Europe, as well as at home—no man connected with the trade more so. In our travels, we found him everywhere inquired about in the kindest manner, and spoken of in the most flattering terms. A large number of the gardeners who came to this country from Europe, were recommended to him for advice and assistance; and these he was ever ready and willing to extend. Hundreds of the men whom he has befriended are now scattered over this country, and will lament his decease.

Mr. Hogg's life was not one of much adventure or vicissitude. He was born at Polwarth, Berwickshire, Scotland, on the 20th of February, 1778, and was therefore aged somewhat over 76 years and 7 months at the time of his death, the 11th of October last. His first occupation in life was taking charge of the men in his father's employ, who at that time was engaged as a contractor in making a macadamized road through the Cheviot hills, supposed to be the first made in Scotland. Here he became acquainted with Mr. Small, the inventor of the iron plow, who was then a country wheelwright, and repaired his father's carts. He has often been heard to speak of sleeping in his house, and of his recollecting the first plows which Small made.

Mr. Hogg afterwards went to Liverpool, and was apprenticed as a printer, working on the *Liverpool Mercury*. After some months, this paper was suspended on account of its editor having published a severe article reflecting on the government, for having permitted a British soldier to be flogged under a guard of Hessians. His indentures being cancelled, he continued to work at his trade for some time longer, in another office.

It was during his apprenticeship in Liverpool that he first showed the remarkable love for plants which so distinguished him through after life, every leisure opportunity being devoted to botanical excursions to the surrounding country, and his first efforts at cultivation being the growing of plants in pots upon the beams of the loft in which the printing presses were placed.

From Liverpool he went to Edinburgh, where he obtained employment at his trade for a short time; but finally, on account of the tastes he had acquired for horticultural pursuits, he abandoned it, and went to the Messrs. Dicksons' nurseries, at Hawick, not far from where he was born, to obtain a knowledge of his new profession. When about twenty-one or twenty-two years of age, he went to Raleigh, in Essex, England, to take charge of a farm belonging to a Mr. Alex. Hume, his uncle, who was purser to Capt. Cook on board the *Endeavor*, and accompanied him in his celebrated voyage around the world. Here, in consequence of the unhealthy location, it being in the fen country of Essex, he was taken ill with a bilious fever, which rendered it necessary for him to remove elsewhere. He therefore went to London, and obtained employment in the celebrated nurseries of Messrs. Lee & Kennedy, at Hammersmith, whence he was sent to a situation near Reading in Berkshire, and he afterward went to a situation in Herefordshire; but as neither of these were what are technically called plant places, he, after an absence of two or three years, returned to Messrs. Lee & Kennedy, who soon obtained for him the charge of the green-houses belonging to Wm. Kent, Esq., of London. This gentleman was one of the merchant princes of England, an enthusiastic lover of plants, employing his wealth and using the influence of his position in promoting horticultural taste. Having a very extensive correspondence abroad, he was enabled to obtain many new and valuable plants. In this situation Mr. Hogg had every opportunity of gratifying his love for plants, and of becoming acquainted with the greatest rarities then known to the botanical world.

The reputation which Mr. Kent's establishment had of being by far the choicest and largest collection of rare plants then existing in England, as a private collection, brought Mr. Hogg in communication with all the most noted horticulturists and collectors of the day; and the privilege which he had of exchanging duplicates of any of his own rarities for those of others, and thus enlarging his own collection, enabled him to attain to that great practical knowledge of plants for which he was so well known. It was here that he became intimate with McNab, of Edinburgh; Murray, of Glasgow; Shepherd, of Liverpool; Anderson, of Chelsea; Aiton, of Kew; Pursh, Goldie, Don, and other collectors of note. The extensive knowledge of plants which he thus obtained, procured his election as a member of the Linnæan Society and the London Horticultural Society. Of the latter society he was one of the earliest members.

After occupying this position for ten or twelve years, he was obliged to leave on account of ill health, consequent on the fever he had in Essex, which left him with a

very debilitated constitution. Being recommended to take a sea voyage, he, on account of his young family, determined to emigrate, at first having his attention directed to Australia, particularly as a gentleman of some position in the botanical world, with whom he was well acquainted, had emigrated and settled there some two or three years previously; but finally he determined to come to America, intending to settle in Canada, having letters from Lord Bathurst, then Foreign Secretary, and other influential friends, recommending him to Sir PEREGRINE MAITLAND, then Governor of Upper Canada, and other distinguished gentlemen. It appears to have been his intention to have established himself in business there as a nurseryman; but upon his arrival in New York, in November, 1821, he was prevailed upon by Dr. HOSACK and other gentlemen to whom he had letters of introduction, to settle in New York, notwithstanding that the letters that he had to Sir PEREGRINE MAITLAND contained instructions to grant him certain privileges, as to land, &c., should he desire to establish a nursery in Canada.

In the spring of 1822 he took a piece of ground situated where Twenty-third street and Broadway now meet, but then quite away from the city, and commenced business, the only nurseries then about New York being those of Messrs. PRINCE, at Flushing, and FLOY & WILSON, of that city, the first only having any reputation for plants.

In establishing himself in business, he had many serious difficulties and disappointments to contend with, chiefly owing to the want of taste among the mass of the people. As an amusing instance of this, we will relate an incident which he often referred to as exemplifying the ignorance of the people in regard to plants. He had quite a stock of beautiful Pelargoniums, which were then just being broke from their native species into the beautiful varieties which we now have. Among them were *Eclipse*, *Lady Washington*, *Waterloo*, *Commander in Chief*, and other seedlings raised by himself, which were quite renowned in their day. They were all coming into beautiful bloom, but no one came to buy or to admire, and he became quite despondent, when one afternoon Mr. LANG, editor of the *New York Gazette*, called on him, to whom he related his troubles. Mr. LANG recommended him to sell them at auction, as being the most likely way of calling attention to his nursery and of disposing of his plants. The suggestion was favorably received, and Mr. HOGG accordingly arranged with Mr. HOFFMAN, a noted auctioneer of the day, and a great friend to horticulture, to have a sale. Mr. HOFFMAN was to have a sale of dry goods on a certain day, and directed Mr. HOGG to send him, the afternoon previous, a cart-load of them. Mr. H., in the advertisement of his dry goods, announced as to be sold a certain number of "Pelargoniums—a new and beautiful article." The trade were all alive to know what it was, but all the explanation from Mr. H. was that they had better come and see and purchase. After the regular sale of dry goods, it was announced that the Pelargoniums would be sold in one of the upper lofts, which was then opened. There was a good deal of merriment at the joke which was played off, but the company entered into it with spirit, and the plants realized double what Mr. HOGG would have gladly sold them for. It being made known whence they came, brought great numbers of persons, in their morning and afternoon rides, to visit and purchase at the nursery.

Notwithstanding the difficulties which he encountered, he persevered, cheered and aided by his friends in England, receiving continually new plants from Mr. KENT, Mr.

Barclay (of the firm of Barclay, Perkins, & Co., the celebrated brewers), who had a remarkably choice and extensive collection of plants; Messrs. Loddiges, Bassington, & Bunney; Mr. Sabine, of the London Horticultural Society; McNab, of Edinburgh; Murray, of Glasgow, and others; and encouraged here by Dr. Hosack, Dr. Mitchell, De Witt Clinton, Cadwallader Colden, Wm. P. Van Ness, and others prominent in their day for their love of natural history.

In return for the many favors he received from his transatlantic friends, he made frequent excursions into many parts of the country, collecting new and scarce plants and seeds, to send abroad. These excursions added much to his knowledge of plants, familiarizing him with their habitats and modes of growth. So successful was he in these collecting tours, that when Don and afterwards Douglas were sent out here by the London Horticultural Society, they were especially recommended to his charge by the Society, and he frequently accompanied them in their excursions in the neighborhood of New York and Philadelphia. Many were the amusing anecdotes, with which he was enabled to amuse his friends, gathered in these excursions, at a time when railroads were scarcely known or heard of.

He was one of the earliest members of the New York Horticultural Society, and his name appears among the original applicants for its charter. During the more active part of his life he was a hard-working member of the society, contributing largely to the first exhibition that was ever held in New York, and for over twenty years was always on its Inspecting Committee and a member of its Council; and we find, by the records of the society, that in 1823 he received a special premium for the introduction of new and rare plants; and the records show that he frequently received a similar award. In that year we find that he exhibited, among other plants, *Bignonia pandurifolia* and *grandiflora*, *Hemerocallis Japonica*, *Phormium tenax*, and *Kennedia coccinea*. The records of 1824 are missing, but in 1825 he exhibited *Amaryllis Johnsonii*, *Cymbidium Chinensis*, *Cistus libinotus*, *Phlox divaricata* and *stolonifera*, *Celsia linearis*, *Alyseum utriculatum*, *Lachenalia luteola*, *Cactus speciosus*, *Schizanthus porrigens*, and *Penstemon digitalis*. In 1826 he exhibited *Erica ventricosa*, *pregnans*, and *conspicua*; *Passiflora ovata*, *racemosa*, *alba*, and *princeps*; and *Daphne cneorum*. In 1827, *Dracæna Australis*; *Gamia spiralis*; *Acacia falcata*, *pulchella*, *conspicua*, and *suaveolens*; *Watsonia corymbosa*; *Moræa indiflora*; *Bignonia venusta*; *Ixia tricolor*; *Chelone barbata*; *Verbena multifida*; *Coreopsis columnaris*; *Gonolobus lævis*; *Heliopsis lævis*; *Ximinesia enceloides*; *Picnanthemum lineare*; *Helianthus atrorubens*; and *Erica tetralix*. In 1828, *Epacris grandiflora*, *Fumaria nobilis*, *Anthyllus barba Jovis*, *Begonia Evansii*, and other plants.

In the earlier days of the society, there appears to have been a generous rivalry among the professional men, and the numbers of new plants presented in a season, by Floy, Wilson, Prince, Phelan, Parmentier, Mr. Hogg, and others, were, we think, greater than would be presented in the same time at the present day.

Among the numerous plants which he was the means of introducing into England, was *Rhododendron arboreum*; and into this country, *Primula sinensis* and *Wistaria sinensis*.

At different periods of his life he made different classes of plants specialities in his cultivation. In England he was noted for his cultivation of aquatics and tropical or hot-house plants; and he was among the first, if not *the* first, who successfully culti-

vated *Nelumbium speciosum* and *Nymphæa cærulea*. In this country, he at one time devoted a great deal of attention to New Holland plants, and had a very large collection of them, such as *Acacias*, *Banksias*, *Metrosideros*, *Eucalyptus*, *Melaleucas*, &c.; also with *Pelargoniums*, the new varieties of which, as already stated, he was the first to introduce into the country; and for a number of years he imported, at considerable cost, the choicest varieties. To the Cactaceæ, also, he at one time devoted much attention, and some ten years ago he had one of the choicest collections in the United States. Of later years, Orchids engrossed more of his attention. Of shrubs and herbaceous plants he was particularly fond; and these, with aquatics, always occupied a large share of his attention.

In his personal habits, Mr. Hogg was remarkable for the simplicity of his manners, his devotedness to his profession, and the especial love he had for nature. Plants more particularly were the objects of his affection, if we may so speak. He loved them for their own sake, and not for any lower motive. From early life a devoted Christian, always surrounded by those objects to which his tastes had caused him to devote himself, and with which he was, as it were, always communing, he troubled himself but little about the cares of the world. Leading a life of simplicity, without ambition, he pursued the even tenor of his way until he was suddenly called away, being stricken with cholera, which, although speedily arrested, so weakened him that his constitution, enfeebled by his advanced years, was unable to resist the shock it had received.

THE OSBAND'S SUMMER PEAR.*

SYNONYMS: *Osband's Favorite, Summer Virgalieu.*

THE *Osband's Summer* is one of the most beautiful of all our American Summer Pears. Until about the year 1846 it was known only to a few persons in Wayne and Monroe counties of this State, but about that time it was brought to notice through the *Horticulturist* by Mr. WM. R. SMITH, then of Macedon, who stated the history of its origin to be as follows:

"Early in the settlement of this part of the State, a small nursery was planted by PARDON DURFEE, in the vicinity of Palmyra, Wayne county. A public road was subsequently laid out through the premises, and a part of the trees in consequence removed. During this labor, the father of my informant, accidentally passing, was accosted by the proprietor with, "Here, I will give you this," handing a Pear tree about two feet in height, with branches forking out near the ground. On reaching home, the tree was divided through the roots, and the two parts planted. Here one of them produced abundant crops for many years, and finally died, probably from the 'blight.' The other was soon removed to a farm in the north part of this town (Macedon), and last year I gathered a few specimens from it, the last which the same potent enemy will allow it to produce. The name given is at the suggestion of the family who brought it into notice."

Thus it will be seen that, like most all our seedling fruits, it sprung up by accident. It has many points of resemblance with the *White Doyenné*, in form, color, and tex-

* See frontispiece.

ture; and on this account it was called the *Summer Virgalieu*. Quite likely it is a cross between that and some very early sort.

The tree is distinct in appearance, of erect and regular habit, moderately vigorous. Young shoots—drab or light brown. Foliage and points of young shoots—somewhat woolly. Wherever it succeeds as well as it does here in Western New York, it may be cultivated advantageously for the market, as it never fails to bear large crops of beautiful and good fruit that will always command ready sale and good prices. It bears picking early. Indeed, it *must* be picked early, or it is pasty and worthless. For a long time we regarded this Pear as of indifferent quality, having usually allowed it to ripen almost fully on the tree. Of late, however, we have taken the precaution to pick it before the color has very sensibly changed from green to yellow, and it ripens off admirably, becoming melting, juicy, and excellent. It lacks sprightliness, but will suit those who are partial to very sweet Pears.

Fruit—medium size, two to two and a half inches in height, and the same in diameter. Form—obovate, resembles a small *White Doyenné*. Stalk—about an inch long, rather stout, and inserted in a slight depression. Calyx—large, open, in a shallow basin. Skin—smooth, clear pale yellow at maturity, with generally a blush, in some cases a bright red cheek. Flesh—white, melting, juicy, very sweet, and slightly musky. Ripe from 1st to 20th of August.

It succeeds well on the Quince, judging from trees of some eight years' growth, in full bearing.

A DESCRIPTION OF THE JENNY LIND SEEDLING STRAWBERRY.

BY JOSEPH BRECK, BOSTON, MASS.

THERE are so many new things constantly brought up before the horticultural world, and so much humbug about a great majority of them, that it is with some diffidence I present to the public a description of the *Jenny Lind Seedling* Strawberry. It has been exhibited for three successive seasons in the Massachusetts Horticultural Society's rooms, and the writer, a member of the Fruit Committee, has had frequent opportunities to test and compare it with other varieties. It is entirely distinct from any other sort in cultivation here. It possesses many excellences, and, in my humble opinion, is worthy of general cultivation. One of our first confectioners, who deals largely in ice creams, and who has used this as well as other varieties of Strawberries to flavor them with, says it is the best sort grown for that purpose. This speaks well for its flavor. The Fruit Committee have repeatedly recommended it; and gentlemen who have seen it, speak in high terms of its appearance, and would gladly have paid a high price to be in possession of it; but as yet the originator, Mr. ISAAC FAY, of Cambridgeport, has kept it in his own hands. It will, however, be for sale this spring.

The seed from which it was obtained, was from a cross of Mr. FAY'S old seedling and the *Early Virginia*. FAY'S old seedling was a large Strawberry but little known, and not considered equal to some other seedlings, and did not receive much attention, but possessed some good qualities, particularly the size. The *Jenny Lind* does not come up in size to this seedling, but is larger than the *Early Virginia*, and a most

abundant bearer, ripening full as early, and equal to it in sweetness, if not superior. Out of more than two thousand plants obtained from seed, sown five years since, *this one alone* produced fruit the following summer; and it has continued to bear and increase in its good qualities ever since, flourishing equally in the shade as in the sun—some of the best fruit and plants having been under the thick foliage of fruit trees.

The plant is very hardy, with luxuriant foliage, sending out strong, stout runners. The leaves are quite large, on tall stems, and more serrated than common varieties. The blossoms are staminate; nearly all set fruit, and form well developed berries. The fruit averages well as to size, quite large, solid, of a fine conical shape. The color is of a rich crimson. The surface of the fruit is smooth and glossy. Seed—considerably indented. Flavor—superior; good judges who have tested it think it is not surpassed. It has ripened the eighth day of June for the last two years.

This Strawberry will commend itself by its earliness and hardiness, by its beauty and high flavor, by its being an extraordinary and prolific bearer, and on account of the size and evenness of its berries.

EVERGREEN SHRUBS.

BY WM. SAUNDERS, LANDSCAPE GARDENER, GERMANTOWN, PHILADELPHIA, PA.

The scarcity of evergreen shrubbery in our pleasure grounds is a standard theme with writers on rural taste, and comparisons with other countries in this respect invariably result unfavorably to us. That there are good reasons for such a conclusion will not be questioned by those best acquainted with our rural improvements; but they console themselves with the reflection that at no distant period we will be in a position to invite comparison instead of shrinking from it, and avoiding, as at present, all allusion to our examples of artificial landscape scenery.

We become more sensitive on the institution of these comparisons when we reflect that no country in the temperate zone is more bountifully supplied with the *material* necessary for the composition of landscape. Those who have any doubts on this point have never attempted to penetrate a Jersey swamp, or followed the course of a river in Pennsylvania. The Holly, Kalmia, and Magnolia, of the former, and the Hemlock Spruce, Rhododendron, and Yew, of the latter, are familiar examples of our native evergreens, and their beauty as ornamental plants are not surpassed by any foreign productions available for these purposes; while our deciduous trees, for variety and beauty, are beyond comparison superior to any other.

The attempts to successfully remove these native plants into cultivated grounds have so often proved abortive as to lead to the belief that the operation is generally impracticable; but when we consider the most favorable conditions in their native localities, and compare them with the treatment the plants receive after removal, we will find sufficient reasons for the failures. Alluding more particularly to our native broad-leaved evergreen shrubs, we find them most abundant under the shade of the Hemlock Spruce, White Pine, and other evergreen trees. Thus sheltered from the aridity of summer, and shaded from the morning suns of winter, they attain their greatest beauty and luxuriance; and although frequently met with in exposed situations, they are never so

healthy as when sheltered by taller evergreens, or located on the sides or at the base of slopes, where they are protected from sudden changes in winter and have the advantage of a more humid atmosphere in summer. If we therefore find these conditions most congenial to our native broad-leaved shrubs, with how much more force do they apply to those of foreign origin, accustomed to a more uniform climate—less heat and more humidity. We see the necessity for a modification of climate, by sheltering from the excessive aridity of the atmosphere during summer and otherwise protecting from the sudden changes and extreme cold of winter.

Now let us look at the preparations made for shrubbery in our pleasure grounds. These are for the most part destitute of vegetation capable of affording either shade or shelter. It is a prevalent custom in selecting a location for a country residence, for gentlemen to "turn their backs upon the numberless fine sites with which our country abounds, and choose the barest and baldest situation in order that they may dig, level, and grade, and spend half their fortunes in doing what nature has, not a mile distant, offered to them ready made, and a thousand times more beautifully done." These "bald and bare" situations have to be planted. Catalogues are ransacked for choice and rare evergreens, or, perhaps the nearest forest is searched for a supply. In either case the results are the same—the plants linger out a miserable existence. Some few may ultimately recover the change, but their appearance is anything but ornamental, and the culture of evergreens is forthwith pronounced a failure.

In planting evergreens, therefore, more particularly those of foreign origin, we must place them in situations similar to their native localities, or otherwise modify extremes in the elements of growth so far as they are under our control. In adapting circumstances to the growth of plants, there are certain influences which can be modified, and favorable conditions which we can supply. The most favorable conditions are those which involve the least change, and that change the most gradual. It is well known that the early exposure to sun after a severe night's frost, will prove fatal to plants which would remain uninjured under a gradual thaw; consequently we find plants subjected to a northern exposure surviving through severe winters, while those seemingly more favored with a southern aspect will perish. The former never being so greatly excited, is therefore not subjected to so sudden changes, and hence its endurance.

The hardiness of plants, or the amount of cold they are capable of enduring, is, to a certain extent, dependent upon the nature of the soil in which they are growing, so far at least as concerns its contained moisture. Soil naturally wet produces late growths of succulent, unripened shoots. Early winter frosts acting upon these soft shoots expands the watery matter in their structure and disrupts their tissue. De Candolle, in his laws of temperature with respect to its influence on vegetation, remarks that plants resist extremes of temperature in the inverse ratio of the quantity of water they contain. We know the Oak to be a hardy tree; but if we were to transfer a growing plant from a hot-house to the open air in mid-winter, it would be very likely to perish. The young, immature shoots of our hardiest plants are frequently destroyed by late spring frosts, and young plants are destroyed by cold which has no effect upon older ones of the same species. Hence the necessity of draining soil and allowing the escape of superfluous moisture. A few dollars expended in laying a permanent drain is often the only difference between failure and success in the cultivation of plants. We have it, therefore, in our power to modify the severity of climate in winter by choosing a proper

aspect and location, shading from sun, and draining of the soil. But winter is not the only trying season for plants. The severity of our hot summers is more frequently injurious than we are in the habit of supposing. It is questionable whether the excessive aridity of our summers is not more hurtful to exotic evergreens than the winter's cold. Their expansive foliage presents a large surface for evaporation, and in conjunction with a diminished supply of nourishment through the roots, the plant is drained of its juices and ceases to grow. To render the extreme aridity less injurious, we must have recourse to shelter. Experiments have shown that the effect of wind is to increase the dryness of the air. "Evaporation increases in a prodigiously rapid ratio with the velocity of the wind, and anything which retards the motion of the latter is very efficacious in diminishing the amount of the former. The same surface which, in a calm state of the air, would exhale 100 parts of moisture, would yield 125 in a moderate breeze, and 150 in a high wind." We can form but a faint conception of the amount of moisture carried off by our scorching summer breezes, although its continued effect upon vegetation is well known, and its results but too apparent in stunted and arrested growth during summer. The humidity that is constantly arising by evaporation from the surface soil in hot weather is very congenial to vegetation. To prevent its rapid exhalation is therefore a desideratum, and this is most effectually accomplished by sheltering and checking the force of sultry winds. A deficiency of moisture in the soil is frequently productive of failure in dry seasons. The only effectual means of counteracting this, is deep cultivation; and, in clayey soils, underground-draining may be considered a valuable auxiliary. Draining, combined with deep cultivation, will secure a regular and lasting supply of moisture during the dryest weather. At first sight this fact does not seem very apparent, and many are afraid to drain, under the impression that the soil would be rendered too dry. Deep cultivation, by loosening the soil, increases its capacity for moisture. Soil, like sponge, can only absorb a certain portion of water; if more falls upon it than it can retain, it becomes injurious unless carried away through drains. The increased depth of soil forms a reservoir for suspended moisture, which in dry weather is conducted to the surface by capillary attraction, where it is available for the purposes of vegetation. Another important advantage consequent upon the removal of superfluous water from soils, is their increased temperature. Wet soil must always be cold, comparatively, because the heat of the sun is expended in evaporating moisture instead of warming the soil.

Having in a previous paper given my views respecting soil, in reference to its chemical constituents, I need not again recur to that part of the subject. In the paper referred to, I urged the importance of an annual application of decaying vegetable matter on the surface to represent the periodical layer of leaves and decaying grasses in natural woods. A moments reflection will convince us of the importance of this consideration, especially as many — indeed most — evergreen shrubs are furnished with small fibry roots which run near the surface, and are consequently dependent upon this surface stratum for their ramification and growth.

The list of evergreens suitable for shrubberies is by no means so limited as might be inferred, judging from the appearance of our pleasure grounds. In order to render these remarks of some practical use, I will give a brief descriptive list of those that I have seen growing in this neighborhood, of a size sufficient to warrant their hardiness and availability for decorative purposes, when properly planted in a suitable aspect and locality.

MAGNOLIA GRANDIFLORA.—This most magnificent of all flowering evergreens is perfectly hardy. There are many specimens from four to ten feet in height. I lately had the pleasure of seeing one twenty feet in height, with a stem two feet in circumference, which produces many hundreds of its fragrant flowers annually. It is sheltered on the north by buildings, but has no protection from the morning sun, which, in winter, slightly injures young plants. There are several varieties, as *Præcox*, *Exmouthii*, &c., equally hardy, notwithstanding they are rarely seen in shrubberries.

CRATÆGUS PYRACANTHA—*Evergreen Thorn*—is one of the most beautiful irregular growing shrubs that we possess. Its beautiful, shining, deep-colored foliage, covered with white flowers in the latter part of summer, and followed with a profusion of scarlet berries which are retained throughout the winter, are additional recommendations for its general introduction.

BUXUS SEMPERVIRENS.—The varieties of Tree Box are in the highest degree eligible. The variegated-leaved has a pleasing effect in a winter landscape, when properly introduced.

COTONEASTER BUXIFOLIA, and C. MICROPHYLLA are beautiful evergreens of humble growth. They are admirably adapted for covering rockeries, or planting on the north side of walls. They will turn brown in winter under full exposure to the sun. Their fruit is also ornamental.

EUONYMUS JAPONICUS.—This is a splendid evergreen when planted on well drained soil, otherwise the points of the young shoots will be destroyed during winter. The golden and silver variegated are equally hardy, and may be rendered very effective in composition.

GENISTA SCOPARIUM—*Common Broom*—is a very useful undergrowth. It is perfectly hardy. As an evergreen, its close habit renders it effective. It blooms profusely and is a valuable addition to our flowering shrubs.

ILEX AQUIFOLIUM—*English Holly.*—There is a specimen here fifteen feet in height, a perfect pyramid of foliage. There are many single specimens about. The varieties are also well represented and seem equally at home. I have seen a plant of *I. latifolia* that stood one winter, but doubt its ability to get over the present one. The native Holly is equally ornamental. It likes shade when young.

AUCUBA JAPONICA.—There are many individual specimens in gardens. It requires continual shade. The summer sun seems more hurtful than the frosts of winter. Its beautiful foliage affords a pleasing feature, and might be more frequently introduced in shady places.

CERASUS LUSITANICA—*Portugal Laurel*—is not plentiful, but there are several plants which have stood out for some years. They are shaded on the south, and give hopes of proving perfectly hardy in such a position. The plants alluded to are in luxuriant health.

CERASUS LAURO-CERASUS—*Cherry*, or *English Laurel.*—This plant is also rather scarce; but from what I have seen, there seems no reason to doubt of its success, if properly situated. Much depends on aspect. Let it be introduced under the shade and shelter of trees, and plenty of leaves thrown around it during winter, and my present impression is that it will be as perfectly at home in such situations as our common sheep laurel. There are plants here, five and six feet high, in perfect health.

KALMIA LATIFOLIA—*Common Laurel.*—It would be difficult to point out a more

beautiful shrub than this. I can not refer to any cultivated specimens. We have them in the woods in all their magnificence, but they are "born to blush unseen, and waste their sweetness on the desert air."

MAHONIA AQUIFOLIA — *Holly-leaved Berberry.* — This is an indispensable plant for the foreground of a winter landscape, but requires to be shaded from the sun and planted on dry soil. It is very ornamental when in flower. *B. fasicularis* is also admirably adapted for undergrowth in ornamental plantations.

PHILLYREAS. — These are beautiful small-foliaged evergreens, perfectly hardy. Specimens here are small, but stand without any protection.

CYRILLA RACEMIFLORA. — This desirable evergreen is rather scarce. It is worthy of more extensive cultivation. Its racemes of flower are plentifully produced — an additional recommendation as an ornamental plant.

TAXUS BACCATA — *English Yew.* — This fine evergreen is well known, and succeeds well. Small plants are sometimes injured by winter sun. *T. Canadensis* is similar to the above, and forms a fine spreading mass of evergreen. It is also plentiful in the woods, and is readily transplanted. The Upright or Irish Yew is very effective in some situations. There are plants here ten feet in height, and of proportionate thickness. It succeeds well in all situations.

RHODODENDRON MAXIMUM — *Mountain Laurel.* — This and *R. punctatum*, *R. ponticum*, and *R. Catawbiense*, are under cultivation. Several magnificent specimens could be referred to. Imported hybrids also stand, under the shade of trees. The great secret in growing these plants, is to keep the roots near the surface, by top-dressings of leaf-mold, or similar vegetable matter, and plant on trenched soil, that they may have abundance of moisture without being actually wet.

YUCCA GLORIOSA — *Adam's Needle.* — The Yuccas are very distinct in their habits, and give quite a tropical expression when introduced in small clumps. When in flower, they command admiration. No pleasure grounds can be complete without them.

JUNIPERUS SABINA — *Savin.* — This beautiful dwarf shrub is well adapted for undergrowth, and adds one more to the list of suitable plants for covering the "nakedness of the land" during winter.

JUNIPERUS COMMUNIS — *Common Juniper.* — No plant that I am familiar with, presents so beautiful a play of light and shade in its foliage as this. It is a fine contrast to some of the deeper-foliaged evergreens.

CUPRESSUS THUYOIDES — *White Cedar.* — A very beautiful native evergreen. Small, flat, imbricated foliage, resembling at a distance the common Arbor Vitæ.

THUYAS — *Arbor Vitæs.* — The Siberian is the most beautiful when young. *T. filiformis* (weeping) is a desirable plant, and *T. aurea*, for its variegated foliage.

TORREYA TAXIFOLIA proves hardy. I have seen a small plant that has been out unprotected for several years. It is very pretty in its young state.

PINUS PUMILIS, from its slow growth, may be ranked as a shrub. It is well adapted for rounding off plantations, or merging them into low shrubbery, planting at angles and bends of walks. Set out by itself in a lawn, it forms a superb rounded mass of close, stiff shoots and foliage.

GREEN-HOUSES, AND THEIR MANAGEMENT.

BY D. R. K., ROXBORO, PA.

HAVING frequently heard complaints, particularly among amateurs, or those who do not keep professional gardeners, of the difficulty of getting a good supply of flowers from their green-houses during the winter months, I thought I would offer a few suggestions on the subject, for their especial benefit, although some of the professional gardeners will no doubt smile at their simplicity; and in doing so, I will endeavor to be as brief as possible.

In the first place, care must be taken that your house is well built, so that it will exclude the outer air.

Second, It must not be too large for the heating apparatus. A small house well heated will produce more flowers than a large one poorly heated.

Third, Have your furnace and stock-hole entirely *within* the house—say under the center stage. This I am aware is objected to by some; but if the flues draw well, which they will be sure to do if there is a regular ascent in them from the furnace to the chimney, and coke or charcoal is used in kindling the fires, you will never be incommoded with smoke or gas, while the additional heat obtained will be at least a fourth. Be careful not to let the earth come in contact with either flues or furnace.

Fourth, Provide a good supply of outer shutters, to use at night.

Fifth, Do not build your house too high, or all the heated air will ascend, and leave the lower part of the house too cold. And this brings us to the most important matter of all, namely, the requisite degrees of heat and moisture to promote health and bloom.

Many amateurs are greatly misled by the directions given in works on gardening, particularly in those published in England, as to the temperature and ventilation. In most of these works the minimum temperature of a *green-house* is set down at 40°; and consequently the young beginner thinks that so long as he keeps his plants from *freezing*, he is perfectly safe. This temperature will answer for what are considered strictly green-house plants—such as Camellias, Rhododendrons, Azaleas, Laurustinus, Pittosporums, and other hard-wooded plants; but in a *mixed* green-house, where there is a large proportion of soft-wooded and herbaceous plants, a much higher temperature must be maintained, in order to have them bloom well. For this purpose the mercury in ordinary winter weather should not fall below 60°, or 55° in *very* severe weather, and do not be alarmed if it rises to 70° or 75° on a fine bright day. The directions given in English works, and too often followed by English gardeners, in regard to ventilation, are not at all suited to the climate of the Northern and Middle States of the Union. Our atmosphere is so much drier, and our winters so much colder, that much less ventilation will answer. The difficulty we frequently have to contend with, is that in cold windy weather we have *too much* ventilation; and I am satisfied that if some of my amateur friends would expend a trifle more in *cotton* (for filling crevices), *coal*, and *shutters*, and less in buying the latest novelties, we should have fewer complaints of the want of boquets during the winter months. While insisting strongly on a high temperature, let me not neglect to enjoin on my readers the importance of supplying the plants with plenty of moisture. The whole matter can be comprehended

in a nutshell—keep your *fires* and *syringe* going. With a good heat, you can syringe the house almost every bright, sunny morning; whereas, if your house is kept at a low temperature, and you give much moisture, you will find that the foliage will turn yellow, and fall.

My readers will understand that the above directions are given for the management of a *mixed* collection of plants; but I would recommend, in all cases where it can be done, to divide your house into two compartments; and in that case you can keep the green-house at 40° or 45°, and the hot-house at 65°, minimum.

Another very important matter, and one without which all your other trouble will be of no avail, is the selection of the proper kinds of plants, and also the proper proportion of each kind, as some kinds are much more used in making boquets than others. I subjoin a list of plants which are almost indispensable for winter bloom, and are yet so easily propagated, and at so little cost, that they come within the reach of almost every one. By getting a plant or two, or a package of seeds, of each kind, in the spring, you can by fall propagate a sufficient number to fill your house.

A LIST OF PLANTS SUITABLE FOR WINTER BOQUETS, WITH THE PROPORTIONS OF EACH KIND.

25	Eupatorium elegans,	From cuttings.	
25	" salicifolium,	"	
25	Stevia serrata,	"	
25	" paniculata,	"	
25	Sweet Alyssum,	From seed.	
25	White Candytuft,	"	
25	Heliotropes,	From cuttings.	
25	Mignonette,	From seed.	
25	Chinese Primrose,	"	
25	Verbenas, of sorts,	From cuttings.	
25	Neapolitan Violets,	From offsets.	
25	Bouvardia leianthus,	From cuttings.	
25	Poinsettia pulcherrima,	"	
25	Euphorbia jacquinæflora,	"	
25	Roses,	"	
10	Wall Flowers,	Cut'ngs & seed.	
10	Stock Gillies,	" "	
10	Scarlet Geraniums,	From cuttings.	
10	Cinerarias,	Seed & offsets.	
10	Fuchsias,	From cuttings.	
10	Habrothamnus,	"	
10	Oak-leaf Geraniums,	"	
10	Epiphyllum truncata,	"	
10	Sparmannia Africana,	From cuttings.	
10	Spiræa prunifolia,	"	
10	" Reevsii,	"	
5	Weigela rosea,	"	
5	Cestrum aurantiacum,	"	
5	Abutilon venosum,	"	
5	Pentas carnea,	"	
5	Petunia,	Cut'ngs & seed.	
5	Vinca rosea,	" "	
5	Lantanas,	From cuttings.	
5	Mahernia odorata,	"	
5	Salvia splendens,	"	
5	Calla Ethiopica,	From offsets.	
5	Acacias, of sorts,	Seeds & layers.	
5	Daphnes,	From cuttings.	
5	Rhododendrons, of sorts,	Cut'ngs & seed.	
5	Laurustinus,	From cuttings.	
5	Pittosporums,	"	
10	Azaleas, of sorts,	"	
25	Camellia Japonicas, of sorts,		

A few Hyacinths, Tulips, Crocus, and Oxalis, and a Passiflora alata and Bignonia venusta planted in the ground and trained up the rafters

The eleven varieties first mentioned in the above list, are indispensable for forming the ground work or filling up of a boquet, and consequently a larger quantity of them are required. The *Spiræa prunifolia* and *Reevsii*, and *Weigela rosea*, should be kept out of doors, and two or three brought in to force every two or three weeks. The former can be forced into bloom in three weeks. The Rhododendrons, Laurustinus, Pittosporums, Azaleas, and Camellias, should be planted in the coolest and shadiest part of the house.

You will perceive that I have excluded from the above list nearly every plant that

is either difficult of cultivation, very expensive, or that continues in bloom but a short time and furnishes but few flowers.

Before closing these remarks, allow me particularly to direct the attention of the amateur to the importance of keeping the plants free from insects. Fumigate frequently with tobacco stems for the Green Fly, and examine closely such plants as are most subject to the Mealy Bug, and kill them with the point of a very sharp stick. They most frequently lurk in between the leaf and the stem. In this way you can in a minute or two rid a large plant.

[We commend this excellent practical article to our amateur plant-growers. From our own experience in a severe climate, we can testify to the importance of the points referred to in the construction of the house, location of furnace, and the use of outside shutters, &c. Here we cover *all* our plant-houses; some with light board shutters, easily lifted off and on, some with straw matts, and some with both. We have also, in our propagating-house and hot-house, a canvass curtain, that is let down under the glass at night, and affords great protection. We intend to say something on this point hereafter. We hope to hear from D. R. K. frequently.—Ed.]

PROPAGATION OF THE DOUBLE CHINESE PRIMROSE.

EDWARD DECKER, GARDENER TO J. Q. JONES, ESQ., NEW BRIGHTON, STATEN ISLAND.

Now is the time to commence preparing a stock of this most beautiful and indispensable winter and spring flowering plant. We suppose you are already in possession of an old plant or two to commence operations on. Such being the case, prepare as many small sized thumb-pots as you have cuttings; also prepare the following compost—two parts well decomposed leaf-mold, one part good turfy loam, and one part silver sand; let the whole be well mixed before using, as on this a great part of your success depends. Having the above requisites prepared, with a sharp knife take your cuttings off close under the second joint from the parent plant, leaving the first joint to supply you with a second crop of cuttings; fill your pots one-third full with broken crocks or charcoal, and the other two-thirds with the compost; with a small stick make a hole in the center of each pot, placing a cutting in each and filling the hole with silver sand; give a small quantity of water to settle them firmly; then place your pots under a bell or hand-light in the warmest part of the green-house, and with a little attention to watering and ventilation, in five or six weeks you will have strong, chubby plants that will amply repay you for the little extra care you may bestow on them, in the profusion of flowers they will give you the following season. As soon as they have filled the cutting pots with roots, give them a shift into pots two sizes larger, adding at the same time a few handfuls of well pulverized charcoal to the compost, which will have a very beneficial effect in keeping the roots in a sound and healthy condition through the hot summer months. Keep them in the green-house, as near the glass as possible, till the middle of May, shading in bright sunshine, when they may be placed in a frame facing the north until the middle of September, and then should be finally shifted into their flowering pots, two sizes larger than their last shift, returning them to their old quar-

ters in the green-house, when they will soon commence flowering and continue to do so till the return of hot weather. Great care must be taken in watering this plant in the summer season, as then it is comparatively at rest. All blooms that make their appearance before the final potting should be carefully removed.

[Mr. DEXTER's communication should have appeared in our last number. This was his intention when he referred to the season. We can not too strongly recommend these beautiful Double Primroses to all who have green-houses. Blooming profusely in a low temperature, they furnish most reliable contributions to the winter bouquet. We can cheerfully endorse the soundness of Mr. DEXTER's brief instructions.—ED.]

ON THE CULTURE OF THE PELARGONIUM.

BY B. MUNN, LANDSCAPE GARDENER, NEW YORK.

I HAVE seen no really fine Geraniums in this country. The reason is obvious, and is this: The plants are not got into a fit state for blooming sufficiently early, and they are forced into bloom by the rapid increase of temperature before they have made and matured their proper growth. The consequence of this is, straggling plants and small flowers.

Let me recommend some amateurs of the flower to try the following plan:—At this time (early in February) many have their Geraniums in small pots, in which they were placed when cut down last fall. Repot them at once into pots eight or nine inches across, which is large enough to grow a Pelargonium in *perfection*, although they may be produced larger in great pots. The compost for them—one-half old hot-bed manure, one-half good loam, with a small portion of sand if the loam is stiff. Put one piece of broken pot over the drain hole, and then, for drainage, put about an inch, or rather more, in depth of lumps of stiff loam as large as walnuts. This is a valuable resource to the roots by and by. Then put in the compost and pot the plant without breaking the ball of roots, and press down the compost round the sides of the pot, moderately hard, with a potting stick. Water them through, and put them near the glass in a house kept at about 50°. Give but little water until the roots have reached the sides of the pot—they will soon be seen at the drain-hole on turning up the pot. Then increase the temperature very slightly, and syringe the plants every day. As they grow, still keep them near the glass and pull the shoots down horizontally toward the edges of the pots all around and secure them to sticks. By degrees they may, most of them, be brought down nearly to touch the edge. The growth will in another month be rapid, and the shoots and leaves will increase much in size. By the end of March, or early in April, the foliage will be of large size and hang over and conceal much of the pot, and the plant will be filled up in the center by growth which the admission of light there (by the continued perseverance in tying out) has encouraged. Then the plant is formed—its growth vigorous, and it is fit to bloom. But this growth will require to be matured, and to secure perfection in the bloom the vigor of wood growth must be stopped. To effect that object, withhold water. Lay the syringe aside, for the present, altogether. Let the plants positively droop in the leaf, from want of water, for a few hours, but not

longer, or you will lose much of the lower leaves, which will turn yellow. Some judgment is required in this operation, but it is soon gained by short experience. When this check has been given, supply the plants with water, but in small quantities, comparatively, for a week, giving it at the root and not with the syringe. The plants will immediately "knot" for bloom; and then, but not before, (still keeping them near the glass,) give them manure water twice a week, and plain water daily, if required, for as soon as the ends of the shoots indicate by their thickness that the bloom buds are forming, the supply of water must again be liberal as it was at first. The old fashioned manure water, made by stirring up a spade full of old hot-bed in a pail of water, *I know* will answer, and you know the strength; but with guano, *and its adulterations*, you may not know, and *may* spoil your plants, although it is very good when properly used. The above manure water should be used clear and diluted with water till it is about the color that a crust of burnt bread two inches square will give to a glass of water in which it has stood five minutes. The next object is to encourage the growth of the bloom, branches, and buds, but not the foliage, which is best effected by giving water at the root, syringing only now and then to keep off dust, &c., (for if the syringe is much used in this state, the plants get straggling,) and by giving all the air possible. When the flower buds are just opening, some shade on the glass is necessary. Open canvass, or close, coarse netting, is the best thing that I know of, because it does not *altogether* shut out the sun's rays.

I am aware that much must depend on locality and time of year, as to how far the above directions can be carried out. An experienced hand will do best to pot in December for his first set of plants, and in January for those to follow, because he can then stop the shoots (which, by the by, he should do, and let the plants break just just enough to show the eyes, in the small pots *before* potting,) and by this means he will have his plants much larger. But it requires some experience for this very early work to be done well. The *principle*, however, that I wish to point out is this: that in this country the European system, as to *time*, must be varied, and the plants must be got to their full size, as to wood and foliage, before the time of spring, when the increase of the sun's power will necessarily force them into immediate bloom without giving time for their bloom-branches and buds to be properly developed before the flowers expand.

CURCULIO REMEDIES.

BY WILLIAM ADAIR.

If we look around at the various remedies that have from time to time been proposed for the Curculio, we will find that they are almost as numerous as those found in the pharmacopœia of the quack medicine venders for the cure of consumption, or any other incurable disease. Such being the case, and a new one in the hands of a committee for investigation, which it is confidently expected will prove successful, it may perhaps be considered superfluous to add any more to the list; but as we are not to have the benefit of the new discovery the present season, and as it may prove, like most of the horticultural *novelties* that we have lately received, rather expensive for these "hard times," it may be well to examine the subject a little, and see if anything can be done

toward saving our crop for the time. However, I believe that all will concede that an effectual, inexpensive, and easily applied remedy for the attacks of this troublesome insect, is worth a handsome reward.

Premising thus far, I will mention a few instances, which may not be generally known, where the Curculio has been more or less successfully combatted. An acquaintance, an amateur horticulturist, who had planted his Plum trees in a yard by themselves, for the purpose of allowing the hogs and chickens to run at large among the trees, and not finding the plan quite satisfactory, covered the ground with fresh horse manure when the fruit was beginning to form; and the experiment was attended with success. This covering is now continued every season, and he informs me that he is rewarded with good crops for his trouble. I do not remember whether he told me to what depth he covered the ground. Perhaps six inches would be sufficient; a larger quantity might induce fermentation, and be injurious to the trees.

Visiting a friend in the interior of the State, I observed a Plum tree that stood alongside a privy, which was bearing a very large crop of fruit, while the other trees in the garden had little or nothing on them, all being claimed by the Curculio, with the exception named.

I have been told of others who have succeeded in saving their Plums, by hanging bottles of pyrolignous acid, creosote, chloride of lime, &c., in the trees. From this we are led to infer that strong, pungent odors are not agreeable to the apparently sensitive olfactories of the insect. The only difficulty that appears here, is that preparations of this character are very volatile in their nature, and soon become exhausted, and it is troublesome and expensive to renew them often. This objection, however, I think is obviated in the following plan, which has proved eminently successful the past season, and which I would recommend a pretty extensive trial of, the present season. It is this: As soon as the fruit is as large as Peas, take a common paint-brush, or any other brush, or a woolen rag, and some fish oil, and cover all of the principal branches and trunk of the tree, with the oil. It is the same that is in common use among curriers, harness-makers, &c. This application is cheap, and it only requires to be done once in the season. I had the pleasure of examining several trees of the best leading varieties which had been served in this manner, the past season, and the result far exceeded my expectations; the trees had to be propped up to prevent their breaking down with the weight of fruit. If the "little turk" had appropriated one-half of the crop to his own use, it would have been a positive benefit to what remained. But he is not satisfied with a share — he takes the whole, if he is not well watched.

Should this remedy prove as successful with all who may try it as it was in the case above noted, we need not despair of Plums — we shall have plenty of them. The discovery (if it is new) is not mine — others may have tried it; but as I have not seen it published, it is herewith presented to you.

[Covering with fresh manure (or old manure) strikes us most favorably as being likely to prevent the Curculio from escaping from his winter quarters in the ground. — Ed.]

AN EXPERIMENT IN DEEP DIGGING.

BY WILLIAM BACON, RICHMOND, MASS.

Last spring we took a corner of an old garden spot which, though it had always been liberally manured and plowed as well as such a piece of ground could be, and to put it in a condition for fruit trees we gave a good dressing of manure and a thorough spading to the full depth of an unworn spade, the longest we could find in the market. In this spading operation, we often came in contact with a subsoil so stiff that it offered a strong resistance to the spade; still the spade was put in at the cost of much physical exertion. The old soil and manure were laid in the bottom of the trench, and the heterogenous and apparently sterile material on which it had reposed, were placed upon the surface. This new earth, upon much of which the sun had never shone, and the dew had never fertilized, was, in due time, planted with garden vegetables—not, however, in expectation of much crop, for the very surface gave almost positive assurance that such things would never grow there. They were sown and planted to furnish a motive for a continued tillage through the season, and, in addition, the ground was planted out with dwarf Pear trees. The season in our region, as in many other sections of the country, was one of distressing drouth—but very little rain from May to October—and, in consequence, the ground on this patch was probably oftener and more thoroughly hoed than it would have been had the dews and rains fulfilled their labors as usual.

We now speak of the result. Our Pear trees (some twenty) on this patch, not only lived but made a desirable growth; and as for the vegetables—Melons, Cucumbers, Tomatoes, &c., &c., to the end of the catalogue—they gave us a crop superior to any we had raised for years.

From this operation, we infer, in the first place, that deep and thorough tillage, and frequent stirring of the earth, are good preventives of the effect of drouth. The deeper and better pulverized the soil, the greater its power of absorption; consequently whenever there is moisture in the atmosphere, such lands are certain to attract their full share of it. It is so, also, with the vegetable-nourishing gases which the air from time time contains. Such lands also suffer less in rainy seasons from excessive moisture, for the same qualities which enable them to absorb when there is a scarcity, enable them to throw off when there is a superabundance.

In the second place, deep and thorough tillage proves, to us, conclusively that the productive powers of earth are not always as nearly exhausted as many strive to imagine, but that the vile skinning, skimming system—the plowing three, four, and five inches deep—is what induces the sterility which so many lament. Any clayey soil—and they are among the best for many purposes—may be made as barren as the desert of Sahara by such a system. Plow shallow and the earth under the furrow will lose the influence of the two essentials of fertility, sunshine and air, and will, of course, become cold, compact, and barren. Roots will avoid such earth; or, if they make an effort to penetrate it, it will be like attempting to extend themselves into a rock to meet the invigorating influences of an iceberg.

In tree-culture—especially in growing fruit trees—even a tolerable degree of success cannot be realized unless this shallow stirring of the earth is given up and the earth *stirred deep*. Trees may, as we have seen, sometimes live in such shallow soils,

but they will always be stinted, sickly, and produce but ordinary fruit; but it is more often the case that they die in the effort to live, and then comes the bitter denunciations on the nurseryman who reared them, the adverse climate, and sometimes the locality, and even the soil, which, under favorable culture, would be just the thing for them, is blamed for the lack of those qualities which man, in his indolence, or grasping after present gain, has taken from it.

VILLAGE CEMETERIES.

BY WILLIAM H. SCOTT, ADRIAN, MICH.

Away from the larger cities, the improvement of the quiet abodes of the dead is not keeping pace with the progress of cultivation and improvement in the living. Why the large cities—who must usually of necessity bury their dead on high-priced ground—should more liberally and more becomingly provide for the dear ones whose affection remains only in the memory, than the village and the country, where land is more abundant and labor cheaper, is a question I need not attempt to answer. There are many good reasons why there should now exist a tastefully kept burial-place contiguous to every village, and in every rural district. How many, think you, Mr. Editor, are there of this character? You may range the whole country through, and I will venture that it will not have shown you a dozen whose keeping is creditable to the wealth and supposed affection and kindred of the large portion of the community whose certain destiny it is to provide *some kind* of a place for the dead. Nearly every community has its church edifices—pretty much up to the means of that community, too, in convenience and decoration;—but while we are taught in them that the spirit of the good shall have a beautiful home beyond the grave, the hearer must instinctively and gloomily turn to the destiny of the mortal casement left vacant by its departure. He can not help thinking of the desolate home that barbarous custom has thought good enough for such bodies as his when the spirit shall have left it. And perhaps he can not help thinking, too, how much better the accommodation within those decorated walls for his carnal portion—whose wants the religious teacher tells him should be as nothing—than that same earthy tenement is likely to get when it can no longer sit upon the pleasant cushion. Reflections of this nature may quite naturally suggest the thought that there must be an essential want in our education, when the most devoted of parents, children, and friends, allow the remains of their relatives to pass from their pleasant homes *on* earth to such dreary and desolate habitations *beneath* it. Here some barbarous nations may shame us.

Happily there may be traced a somewhat coincident change for the better in the school-house and the burial-place. While through the early influences of well beautified, well ventilated, and convenient school structures, opportunity is afforded for the refinement as well as health of our youth, there has been some progress from the barren "grave-yard" to the properly embellished cemetery. But this progress has been nearly all confined to the large cities. Thousands of villages in America have chosen their interment grounds almost solely with reference to first cost; scarcely with an eye to beauty of position, or with reference to protection. Generally, grounds have

been chosen where water might escape, and where the sexton's spade should not find too much impediment either by stone or clay. But how many have been set off from the corner of some treeless field, whose best day of farming fruition had passed, and whose owner could find no more profitable use to put it to! A day's ride in almost any part of wealthy and cultivated New England will usually show many cheerless spots whose purpose is surely marked by broken, leaning, and prostrate stones; by the twisted mats of decayed grass and briars; and by the cold, stately, and mocking monuments that ostentation raised to preserve that same caste in the population of the dead that the names to whose memory they were erected, strove to maintain in life. If you step over the stile, you will find as much incongruity as you are likely to find in the same space elsewhere. You will pass the stunted Willows—almost the only tree-life in the spot, and they with scarcely vigor enough, even, to effectively weep. Have a careful eye to briars, and to the snakes with which your imagination at least will people a spot so congenial to their tastes. Look out, too, for the recumbent, half-visible slabs that in the first impulse of grief were made to tell such flattering tales. The virtues of the living for whom they speak, seem to have had their full posthumous reward in the flattering or warning lines of the graver's chisel; for you see no further offering to their memory—nothing else to show that the ground below you holds something once valuable. The mound of earth has sunk to the surface level or below it, and you will readily conjecture that no shrub nor flower had ever been planted there. Advancing, occasionally a forlorn Myrtle, stunted Sweet-briar or Blush Rose, will supplicatingly peep out at you through the dead and matted grass and weeds, as if hopeful of relief. As your eyes will be entirely open for shade, you will not overlook the more pretending Balsam Fir, which has found its way into the lot—as stiff and ungenial as all the rest. Here a tall picket fence, mainly white, with red tops, carefully guarding and as happily hiding what it incloses; then another, all black; then another, with white pickets and black tops. With little disposition to linger among associations so forbidding, you will gladly reach the opposite side from where you entered, and be gratified to find relief for your vision in the naked field beyond.

In one of the oldest and wealthiest towns of Connecticut, and within a mile of each other, there are two very much such spots as I have described. One is the depositure of many generations, and was dedicated to the dead in a ruder and less cultivated age than the present; but the other has been in use a comparatively short time, and was purchased by wealthy people. The town has a larger average wealth to the individual than any community within my acquaintance;—scarcely any poor people, but full of the wealth of long years of rapid accumulation by the old inhabitants, and the superfluity of New York retired merchants. The two miles square whose many well improved eminences look out upon the waters of Long Island Sound, is almost all in the highest state of cultivation. Some of the best planted ornamental grounds and most elaborate architectural specimens in the country here meet the eye in quick succession. But such neglect of the dead!—the tamest and least interesting spot, receiving the smallest possible attention—treeless, shiftless. The railroad and the steamer, that every day bear home the proprietors to their comfort and luxury, should also, when this life is departed, be the medium to carry their remains to some rest less in contrast with the beauties they have enjoyed while living.

The newer portions of the country have less reason to feel ashamed of their efforts

in this matter than the older States, where everything but a wrong spirit in the people seems propitious for tasteful and fitting attention to the dead; but while the latter have better material in their more picturesque and varied surface, so frequently coursed by bright little streams, the former are showing the most spirit in the selection and subsequent care of their smaller cemeteries. This should not be. All over the country pleasant burial-places should show that the spirit that conceived and so elaborately carried out the idea of Greenwood, Mount Auburn, and Laurel Hill, may be extended to the suburbs of all our villages, and be profitably appropriated by all thriving farming communities away from the towns;—not the extravagance and childish display which so frequently mar the beauty of those cemeteries, but the much that *is* refined and appropriate in them,—the fine native trees so judiciously preserved; the natural effect of variety of trees gracefully arranged; and—what these noted spots have not had sufficiently in view—a monumental architecture less pretending, showing more feeling, and in better keeping with the spirit of the spot. May I suggest, without incurring the imputation of want of due respect, that *black* is a hideous accessory in cemeteries? There is enough to remind us of sombre mortality without any such black and gloomy reminder as the iron inclosures that so frequently mark out individual rights. Where *all* is carefully guarded, there can be no use for such fences. Cheerfulness and warmth should be constantly in view; there is no want of respectful dignity in either. Anybody but a misanthrope would choose the living beauties of green trees and bright flowers to cheer the place of his rest. If any barrier may be used to mark lot-boundaries, it should be some plant of modest growth, or one easily controlled by the use of the pruning-knife. Most hedge plants grow too large and rank, and unless cut very close, would soon altogether hide all modest plants within. Something smaller—as the Burgundy Rose, or the Box—is more appropriate.

The error of most private grounds—crowded planting—extends to the cemetery. Variety of anything of the tree kind is quite out of the question in the usually small lots. When the spirit of tree-planting seizes one in the first genial days of spring, he is tempted to anticipate time's rapid progress by a very profuse use of trees; and where there is scarcely room for one well developed tree, half a dozen or more uncongenial striplings gratify the planter's present eye at a sacrifice of all future good effect. Better prepare the ground well for one good tree, and make that show how much luxuriance and beauty may be attained. Almost any of the forest trees may be used successfully in the cemetery. They should always be taken from open ground in the field, hedge-row, or nursery; never from close woods. If the ground selected be so fortunate as to have thrifty second-growth young Hickories, it has what can not easily be got by transplanting. If Nature has favored it with but few specimens, they should be judiciously preserved; for there is no tree of equal beauty more difficult to remove. But the same characteristic that produces the difficulty, is a marked virtue for cemetery adornment which renders it doubly valuable. Its long tap root, that finds its way into the earth, supplies, in the driest seasons, sufficient moisture to preserve an unfading foliage; while the absence of lateral roots near the surface allows no obstruction to roots of grass. The smooth clipped turf may grow as thriftily next the body of the tree as away from it. No roots, either, to be molested by the sexton's spade. A beautiful effect may be produced by planting handsome vines, to climb the trunks of the trees. The climbing Roses, which have very greedy roots, would grow nearly as well

by the side of a Hickory, if the ground was made rich, as in the open ground; while if planted by the side of an Elm, it would find its long horizontal roots quite in the way. I do not speak of the Hickory to the exclusion of others, but only as a very common undomesticated tree, and too little valued as an ornamental shade. The greater variety of really good trees a cemetery can have, the better. The Elm is a more graceful as well as a more majestic tree. The peculiar green of the White Ash upon its well rounded head gives variety of foliage. The Oak family have an imposing and characteristic dignity; and there is a long list of other good trees, each having its merit. There are the trees of the continual green; and there are those, too, that, destined to part with it, assume the not less beautiful and appropriate hues in which advancing autumn never fails to clothe them. There is a higher beauty, even, in the soft and richly blended, ever-varying tints of the later year, than in the more even verdure of June. Hence the merit of that large class of trees that so persistently defy the frosts. Those common trees, the Dogwood and the Sassafras, then have beauty enough to win that attention that their earlier modesty could not. The beautiful Virginia Creeper, which possesses among vines this autumn glory in a marked degree, might be made to atone somewhat for the want of it in the suddenly denuded Hickory.

As it is almost always desirable to select ground at least partially covered with natural forest, a matter of next importance is a judicious selection of Grasses. In our own very prettily wooded cemetery, the result of much labor in seeding under the young second-growth trees has been discouraging, and only from ignorance of the fact that only a few domesticated Grasses thrive under trees. The more generally used are the least suitable — such as Timothy and Red Clover. Orchard Grass is far better.

But I will not prolong what was only commenced as a reminder of the attention due to what should be a leading matter connected with horticultural improvement. For lack of the well beautified public grounds that every town should have, our cemeteries may be made delightful places of resort for all citizens who choose to pass a pleasant and quiet hour away from care and confinement. Almost every village may find some wild spot capable of ready adaptation to such use. If swamp or rock does not make too large a portion, the wilder, the better. In cemeteries, as in private grounds, forest trees are quite the most effective and economical form of embellishment.

THE CRYSTAL PALACE AT SYDENHAM.

BY R. B. LEUCHARS, LONDON, ENGLAND.

As you requested some notes on interesting subjects on this side the water, I do not think I can better comply with your request than by sending you a few remarks on the present crystal palace at Sydenham as a horticultural structure, and the somewhat novel style of landscape gardening adopted in the grounds around it. To enable your readers, however, to form an adequate idea of this extraordinary place, it will be necessary to give a brief sketch of the building itself, and the spot on which it stands.

The building stands on an irregular parallelogram of ground, containing nearly 300 acres. The most northern portion of this ground rises to the height of some 200 to 300 feet above the level of the surrounding country, and on this elevated ground the

palace is erected. This hill is undoubtedly a splendid site for such a building—commanding on the one side a prospect of the counties of Kent and Surrey, and on the other, of the great metropolis, which it overlooks. The approach by railway is up a steep incline, which carries the visitor to the very corridor of the palace.

The building consists of a grand central nave, as it is called, which forms the middle and largest as well as highest portion of the building; two side aisles, which constitute that part of the building right and left of the nave; the transepts, or projecting portions of the building; two main galleries and two wings; beside the colonnade, 720 feet in length, which leads from the railroad terminus to the south wing of the palace. The effect and general beauty of the building is very much increased by several changes that have been introduced since its erection at Sydenham. Those who saw it at Hyde Park must have been struck with the monotonous effect which it had upon the observer, by the great length and sameness of every part of the structure, and also by the continuous rows of columns and girders which succeeded each other so rapidly that the eye felt fatigued and the perceptions deadened very speedily by the contemplation of them, so as to render it impossible to form a true conception of the extent and capacity of the building. As the palace is now erected, we find pairs of columns and girders advanced into the nave eight or ten feet beyond the continuous line that supports the roof, at distances of seventy-two feet, and thereby very much improving the interior effect, and enabling the observer much more easily to measure and to appreciate the extent of the building. I would here remark, that in the French crystal palace, now being erected at Paris, this fault is even more striking than in that at London, although the Paris building has a very different effect upon the mind—probably from its more permanent and substantial appearance, being built of the white sandstone of the Paris basin, which, when first hewn and polished, has the appearance, at a short distance, of white marble; but the interior of the building has a very deadening and monotonous effect. But as the interior of the French palace is yet unfinished, and also unfurnished, it is hardly fair to pronounce upon the effect of the whole. It is a splendid structure, and by many will be considered superior to anything that has yet been produced.

The general appearance exteriorly, of the Sydenham palace, is not very unlike that erected at New York, except in the greater extent of the former. For beauty of design, we think the New York palace far before it, as also in the proportion of its parts and in the architectural as well as the mechanical arrangement of its details. The great defect of all glass structures, whether large or small, is a want of harmony, both with the things within and the things without. There is unity, but there is no harmony; and what is unity without harmony? A building may be architecturally and mechanically perfect in all its parts, yet be in harmony with nothing about it; and whether these structures be termed the "Early English" or the "Modern English" style, we are very much of the opinion that the French palace, which is very different from either the London or New York ones, will, with its opaque walls and massive entablatures, be much nearer the mark of architectural harmony than either of its predecessors.

The Sydenham building, like its New York namesake, is entirely of iron above the ground floor, with the exception, we believe, of a very small portion of the north front, which is paneled with wood. The whole of the main building is 1,608 feet in length, and the wings or ⌊ at each end are each of them 574 feet, making a continuous length

of 2,756 feet, which, with the colonnade 720 feet, leading from the south wing to the railroad station, and which is to form a grand promenade conservatory, with plants and statuary on each side of the path, will form a straight walk, without diverging to the right or left, of 3,476 feet, or nearly three-quarters of a mile. The length of the Hyde Park building was only 1,848 feet; so that, including the wings and colonnade, the present structure is larger than its predecessor 1,628 feet. The superficial area of the ground, including the wings, is 598,396 feet; the area of the gallery flooring and wings, 245,260; altogether amounting to 843,656 superficial feet. The width of the nave, or main avenue of the building, is 72 feet, which is also the width of the north and south transepts; and the heighth of all three, from the floor to the springing of the arch, is 68 feet. The height from the flooring to the crown or top of the arch is 104 feet. The length of the north and south transepts is 336 feet respectively. The length of the central transept is 384 feet; its width, 120 feet; its height, from the floor to the top of the louver, or ventilator, is 168 feet; from the garden front to the top of the louver, 208 feet.

The Sydenham palace is doubtless greatly improved in its exterior effect from the old one in Hyde Park, as very many modifications have been properly introduced—such as the arched roof which covers the nave, raising it 44 feet higher than the nave as it existed in Hyde Park; the three transepts which are now introduced into the structure, instead of one; and the center transept towering into the air, and forming at once a center-piece pleasing in its outlines, and also a grand hall to the palace, of surpassing magnitude and brilliancy. A great improvement, also, is the formation of recesses twenty-four feet deep in the garden fronts of all the transepts. These throw fine shadows on the perspective of the building, and relieve the continuous surface of plain glass, which is the grand source of that unity without harmony that is so justly complained of in all glass buildings of large size, and which gave the New York building, with its Elizabethan turrets, a decided advantage over its predecessor. This external sameness was much felt in the Hyde Park building; but now the interposition of low square towers at the junction of the nave and transepts, the open galleries toward the garden front, the long wings stretching five hundred and seventy-four feet on either side, produce a play of light and shade, and break the building into parts, which, without in any way detracting from the grandeur or simplicity of the structure, relieves and satisfies the eye, and shows that this kind of buildings, if a due share of attention is bestowed upon the design, may be made to blend much more harmoniously together, as well as with external circumstances, and at the same time possess in a very high degree both architectural beauty and artistic effect.

The removal of this vast structure from its old site in Hyde Park to its present place, shows in a striking manner the adaptability of this material for all kinds of hot-house and conservatory purposes in the United States, where the exchange of real estate and the rapid increase of its value in the suburbs of cities renders the removal of such buildings frequently very desirable. We believe that all the materials of the old building have been used in the present one, except some of the roof-glass, which had to be taken out, and some of the transept framing, which, according to the new plans and improvements, could not be rendered available, but which in all ordinary construction of such buildings need never occur, as such structures may be erected for all purposes to which glazed houses are usually applied, whether large or small, and

be removed from one place to another without the disuse or destruction of any portion of them, and that, too, at a comparatively small cost.

The principle upon which the Sydenham palace is constructed, appears to be precisely similar to that of the New York palace; and I think, also, the system of connection between the girders and columns are the same; but I am not certain whether the rods, or diagonal braces of the building, are secured in the same manner, which in the Sydenham palace appear to be both adaptable and necessary in a building exposed as it is to high winds, though not probably in the New York palace in the sheltered spot where it now stands. These rods or bracings are provided to resist the action of the wind, and are strong enough to bear any strain that can be brought against them. They are fitted with screwed connections and couplings, so that they can be adjusted with the greatest accuracy. The roof also is different, being wholly, from end to end, on the ridge and furrow system, though the glass here employed is much thinner and inferior to that employed in the New York palace, being only single glass, about one-thirteenth of an inch in thickness, or what is here generally called 21-ounce glass, that is, glass weighing twenty-one ounces to the square foot—a quality of glass which we consider very poor indeed, and hardly strong enough for common green-house purposes. The double Redford glass, which is now frequently used in the United States, when it can be had of a fair equality in thickness, is far superior to the glass used in the Sydenham palace.

Making what we shall call a horticultural tour through the building, we feel nothing but disappointment everywhere we look; and this is the more surprising when we consider who is the horticultural director of the building, and what were the means at his command. The meagre materials and bungling arrangement must at once strike the observer accustomed to look upon such matters, even on a much smaller scale, with an eye to beauty and effect, both present and prospective. But assuredly this department, as it now presents itself to the visitor, making every allowance for the smallness of the plants and their recent removal from other places, is neither on a par with the other departments of this gigantic undertaking, nor what might be expected from the celebrity of those at the head of the horticultural department. The most striking horticultural objects that present themselves to the visitor, on entering the palace, are rows of Orange and Pomegranate trees, which are placed at regular distances along each side of the nave and transepts. These trees are for the most part round, stiff, and formal in their appearance; and with their great old boxes standing high, bare, and all exposed to the eye, produce rather an unpleasant effect upon the mind, as the thing is neither artistic nor natural; yet, by its character and its position, an attempt is clearly perceptible to make it both. This disposition of these specimens may by some perhaps be called good taste, but we are very sure there are many who will take exceptions to such an arrangement. It will be remembered that these trees were sold on the confiscation of the Orleans property by the present government of France, and they were collected by Louis Philippe from the gardens of different palaces to adorn his favorite residence at Neuilly. When the property of the Orleans family was sold at auction, they were bought by Sir Joseph Paxton for the decoration of the present crystal palace. Some of these Orange trees are said to be over four hundred years old, but are not by any means the size that such a great age would indicate; but they have been subjected to that system of pruning which in France

converts every vegetable product that will bear such infliction, into the shape and form of vegetable sculpture. It is to be hoped that, under the management of their present possessors, and now that there is no lack of head room, their branches will be permitted to expand in all the irregular beauty of a natural tree, when they will certainly be the most beautiful and interesting objects in the whole vegetable collection of the crystal palace.

We were much struck with the surprising beauty and healthiness of the numerous baskets of flowers that were suspended from the girders, some of them on a level with and some of them above the galleries. We counted nearly three hundred of these baskets, which are made of wire, and suspended by strong wire cord from the girders and braces. They were filled with all kinds of bedding-out plants, many in full bloom —such as Petunias, Heliotropes, Tropæolums, Verbenas, Fuchsias, Geraniums, &c.—in the most perfect health and luxuriance. We observed some of what we usually call "climbing plants" hanging some fifteen or twenty feet down from the basket, and having a most charming effect. On the braces and columns, also, creepers and climbers are planted—such as the Bignonias, Wistarias, Tasconias, &c.—which, in course of time, will clamber over portions of the building, and line with a grateful shade the great arches of nave and transept, and give the palace and the objects within it more quiet beauty and reposing effect.

The south end of the palace contains collections of plants, consisting of Acacias, Camellias, Azalias, Rhododendrons, the rare and delicate Coniferæ, and other conservatory plants, among which the New Holland plants are very conspicuous. An attempt has been made, though from necessity a very unsuccessful one, to give a national or tropical character to the grouping of the plants, as well as to the animals; but, although this would be a much desired object, yet even here very little has been accomplished toward that end, except in so far as a promiscuous collection of plants are assimilated, as far as position and other circumstances will admit, to the productions of the country which is represented. Thus, in the portion of the transept facing the Egyptian court, we find the beds filled with Egyptian Palms and other plants indigenous to that country. One very peculiar and curious production is exhibited in this section, viz., two curious-looking plants called "Elephant's Foot," which are, we believe, the largest specimens ever brought to Europe, and were imported from the Cape of Good Hope by the company to which they now belong. This plant is said to be the longest-lived of any vegetable product, and these specimens are said to be three thousand years old. This portion of the palace is divided off from the rest by a screen, and is kept at a higher temperature solely for the growth of tropical plants; and here we find, therefore, all those hot-house productions which will not bear the cool and temperate atmosphere of the other portions of the palace, among which are many beautiful Palms. In this part of the building also, there is a large water-tank, in which are flourishing Nymphæas, Nelumbiums, the beautiful *Victoria regia*, and many other fine aquatics. The water in this tank is warmed by hot-water pipes running around the sides. But as we will take some notice of the immense heating apparatus of this place in another letter, we will pass this matter for the present, and conclude our notice of the plants.

We have stated that the arrangement of the horticultural department is very disappointing, and we have the satisfaction of knowing that we are not singular in our

opinion, for notwithstanding the gigantic dimensions of the building, there is a multum in parvo system apparent—a want of length, breadth, and thickness, so to speak—a want of capacity in the ideas of extent in beds and borders, and particularly so in the planting of them,—which to our Americanized view seems very incompatible with the far-famed crystal palace and the gigantic scale on which every thing about it is planned; and, large as it is, it strikes us as having, like too many green-houses and conservatories in the country, twice as many plants as it ought to contain.

Having occupied more space than I intended, I must continue my remarks in another letter, when I have a little more leisure.

AN ITALIAN COTTAGE.

BY AN AMATEUR ARCHITECT.

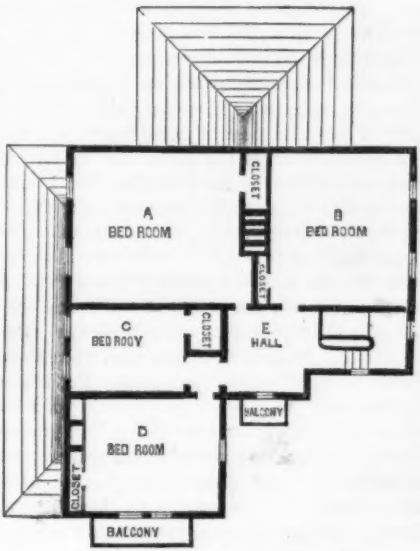
I do not suppose I can furnish the readers of the *Horticulturist* with any designs that will compare with the truly beautiful ones already presented to its readers; but perhaps I can present something that will satisfy the wants and come within the means of a

portion of your numerous readers. As a general thing, we build our houses too costly—spend too much money on the house, and too little on our grounds. We embarrass ourselves in building, and then all else has to suffer. As a general thing, we go to extremes, and either build a very plain square house, without the least pretension to taste, or one abounding in gables and unmeaning ornaments.

The one I now present is designed to avoid these two extremes. It is plain, yet I think pretty, and well proportioned. There is nothing about it to make it much more costly than even the plainest house, and nothing that will be apt to get out of repair. It is suitable for the suburbs of a city or village, and would not make a bad farm-house. Perhaps professional architects will criticise it, and I am willing they should do so; and if they will furnish good, plain, tasteful, cheap plans for us farmers, I for one am willing to lay down the pencil, and submit to be taught, instead of endeavoring to teach others.

The cellar of this cottage is to be seven feet six inches high, the first story ten feet, and the second story nine feet. The cellar walls to be of stone, eighteen inches thick. The superstructure to be framed, outside clap-boarded or sheathed, inside plastered two coats. Architraves to be seven inches wide in the principal story, and six inches in the second story. The roofs may be shingled. The inside finish to be neat, yet plain, making the building cost, when finished, about two thousand dollars.

FIRST FLOOR.



SECOND FLOOR.

Editor's Table.

TWENTY-FIRST DAY OF MARCH, and we are still ice-bound here in Western New York. The greater part of our February snows have disappeared from open places, but on the east side of the fences, and in all the cross roads and lanes running north and south, solid beds yet remain. For two weeks past, spring has been promised,—a fine, bright sun and a bland atmosphere, for a day or two, and then a freeze, heavy clouds, and perhaps violent gusts of wind. We await the growing season impatiently, because until then it will be impossible to determine the extent of damages sustained by the extraordinary cold of the 6th and 7th of February. Already we know that not only are the Peach fruit-buds almost totally destroyed through Western New York, but thousands of old trees are dead, dried up, seasoned as thoroughly as cord-wood that was cut six months ago. This is the case over a very large tract of country—indeed the entire Peach district of Western New York, from Oswego to Buffalo. We think that nearly all aged trees, and those bordering on decline, must perish; but there is yet hope for the young trees. They too have suffered; but the vigor and elasticity of youth may enable them to recover.* This shows what we may expect when the thermometer descends to 20° or 25° below zero. Peach trees never could be better prepared to resist the effects of intense cold. The dry season of 1854 ripened the wood and matured the buds in the most perfect manner. Neither could any intense cold be accompanied or succeeded by more favorable circumstances—a perfect calm during the entire two cold days and nights, at the same time cloudy, and remaining so until a day or two after the cold period had passed.

A correspondent of the *Rural New Yorker* advances the opinion that the Peach buds have not perished by the cold alone, but from being unusually well matured and fully developed by last season's drouth and heat; that when we have cool, moist seasons, allowing the Peach to grow late, the buds are able to withstand a much greater degree of cold. In our opinion this reasoning is not sound. Give us well-ripened wood and buds to resist cold. We see that in the case of young Peach and Apricot trees that grew until a late period in the fall, the points of the shoots are quite winter-killed, while young, ripe shoots, in older trees, are comparatively safe. Buds may get into a stage of development, as in spring, towards blossoming time, when they would certainly be more easily injured than even imperfectly matured buds. But this state of things does not exist in winter.

Fortunately, there was a good covering of snow on the ground, so that Peach and all other buds of last summer's working in the nursery are safe. In examining some nurseries of young Peaches budded last summer, we found about half the stock above the snow, quite discolored, and what is usually called *winter-killed;* while below the snow, all is safe and sound. It is surprising, too, how thin a covering of snow has proved to be a complete protection. In some cases we find branches of evergreens that were covered not

* The Pear fruit-buds are considerably injured; Cherries but slightly, as far as we are able to judge at present. Mr. DOWNING informs us that at Newburgh the thermometer was not lower than 14° below zero, yet three-fourths of the Peach buds are destroyed, and Cherries considerably injured.

more than one or two inches deep, come out as fresh and green as in mid-summer; while all above the snow-line, the foliage is as red as though it had been scorched by fire.

In England the winter has been remarkably severe—unequalled within seventeen years past. In commenting on it, the *Gardener's Chronicle* states the following, to show the protecting power of snow:

"The effect of snow, even in small quantities, as a protecting material, was strikingly shown on the night of the 10th (February). While the exposed thermometer stood at 1°, another close by, covered by two inches of loose snow, stood at 20°."

Here we see *two inches of snow* giving 19° difference—a fact that should not be forgotten.

We can not pursue this subject further at present, but shall return to it when we obtain more information. Our correspondents will oblige us, and benefit all readers of the *Horticulturist*, by giving such facts in relation to it as may come under their observation.

Fruit-Growers' Society of Western New York.—A society under this title has been organized for the advancement of fruit-culture in the western counties of New York, beginning with Onondaga at the east. The President is John J. Thomas, of Macedon; Secretary, John B. Eaton, of Buffalo; Treasurer, Wm. P. Townsend, of Lockport. A committee of three is to be appointed in each county, to collect information and coöperate with the society in carrying out its objects.

This promises to be one of the most efficient organizations of the kind in the country. The gentlemen who have been placed at its head are not only competent, in every respect, to discharge the duties imposed upon them, but they are well-known to the fruit-growers of Western New York, and enjoy their confidence and esteem to the fullest extent.

We intended to give a full account of the proceedings up to this time, but find that we must defer it till next month. In the mean time, we hope that the county committees and *all* whose aid has been solicited, will manifest that interest in the matter which its importance justly demands.

Agricutural College of the State of Michigan.—A bill has been passed by the Legislature of Michigan establishing an Agricultural School and Experimental Farm, to be located within ten miles of the Capitol—Lansing. The purchase of land is to be not less than 500, nor more than 1000, acres in one body, and to cost not more than fifteen dollars per acre. Tuition to be forever free to pupils from the State of Michigan, and to be under the direction and supervision of the State Board of Education.

Michigan is a great agricultural State, and she does well to build up in her center an institution where her youth may be educated in the profession. The education of farmers' sons, now-a-days, drives them from the farm simply because it is not such as it should be. All the learning must go to the city, and all the ignorance remain at home. Agricultural schools in less than a quarter of a century will, we trust, correct, and perhaps reverse, this state of things. We should, in justice, say that much credit in this matter is due to the able Secretary of the Michigan State Agricultural Society, J. C. Holmes, Esq., for his indefatigable efforts to attain this object.

Mr. R. B. Leuchars, of Quincy, Mass., author of the popular treatise on the Construction, Heating, and Ventilating, of Hot-houses, has just returned from Europe, where he has spent the winter months. We are indebted to him for an interesting account of "The Crystal Palace at Sydenham," as he found it, which should have appeared last month.

NOVELTIES ANNOUNCED IN THE ENGLISH JOURNALS.—LUCOMBE, PINCE & Co., of Exeter, England, advertise a new Fuchsia under the name of "*The Double Snowdrop Corolla'd Fuchsia*" (*Galanthi flora-plena*) having a pure *double* white corolla, resembling a fine large double Snowdrop, with rich scarlet sepals.

The New Chinese Potato (*Dioscorea batatas*)—is advertised at fifty cents per tuber, or fifty dollars per one hundred. It seems to attract considerable attention. Dr. LINDLEY regards it as likely to prove valuable for garden cultivation. It will no doubt be tested here this coming season.

The Chinese Sugar Cane (*Holcus saccharatus*)—spoken of as likely to prove useful for distillation instead of grain, and containing a large amount of fibre that may be employed in the manufacture of paper.

Fleming's Hybrid Cashmere Melon.—Seeds of this are advertised by Mr. R. GLENDINNING, of Chiswick. It carried off the first prize last summer at Chiswick, and is probably the best Melon known.

Waite's "Alma" Cauliflower—is described as being superior to the *Walcheren*—very large and firm heads.

DAHLIAS.—W. C. WILSON, Esq., of Baltimore, who has always one of the best private collections of Dahlias in America, writes us as follows:

"The following were the best Dahlias in this latitude last season, and some of them were fine the previous year:

1. Reine des Belges.	7. Victorie.	13. Miss Ward.
2. Mrs. Hansard.	8. Cote d' Or.	14. Duchess of Kent.
3. Emperor Maroc.	9. Jonas.	15. Gen. Fauchier,
4. Elegantissima,	10. Elizabeth.	16. Unanimity.
5. Diamant.	11. Miss Wayland.	17. Flora McIvor.
6, Hyppolite.	12. Madam Zahler.	18. Forget me not.

These were the best of 120 varieties. The first five are unequalled as fancy flowers; the 6th, 7th, and 8th are splendid self-colored. The 7th is remarkable for its full and perfect form; color, a rich crimson marroon."

We can add our testimony in favor of all except Nos. 1, 5, 6, 7, 8, and 9, which we have not seen, but we ask for no better recommendation than that of Mr. WILSON.

NEW PLANTS.—Among the recent introductions to public and private collections of plants in this country, are to be found *Hexacentris lutea*, *Balsamina Jerdoniæ*, *Maranta Warsewickzii*, *Azalea narcissiflora*, and many others not generally distributed, but the above are new to us here. S.

A PORTABLE GRIST MILL.—We have received a circular setting forth the excellence of "FELTON'S Portable Grist Mill," patented Jan. 2, 1855. It is represented as being "well adapted to grinding Wheat, Corn, Oats, Rye, Buckwheat, &c., and may be driven by steam, wind, water, or horse power, doing the work with great rapidity and perfection, grinding from five to eight bushels of corn meal, and from ten to twelve bushels of feed per hour, with less than two-horse power." We fancy that such a mill as this is described to be, would be of great service to farmers, and others who have a large number of horses, or other farm stock, to feed. We have felt the want of such a thing ourselves to prepare horse feed, and are inclined to give this a trial.

NURSERYMEN'S REPUTATION.—Some of the State reports speak of *nurserymen* as persons of rather doubtful reputation, and "nurserymen's humbugs" are sometimes alluded to. We do not think this is unjust; for, with some very honorable exceptions, that profession, more than any other, has been filled in this country by quacks and pretenders. We happen to know a few who have so very little knowledge of pomology as not to be able to distinguish some of the most common fruits—who positively, for instance, do not know a *Baldwin* from a *Spitzenberg*, nor a *Bartlett* from an *Urbaniste*,—who succeed in crowding annually thousands of dollars worth of trees into market, and who impose vast numbers of spurious sorts on the public. They sell a little "*cheaper*," and this explains the whole. While these things are so, we are willing the "profession" shall have its richly-earned reputation; and those who are capable and honest, must build a character on their individual merits.—*Country Gentleman.*

The *Country Gentleman* is right. The country is overrun with persons who represent themselves as nurserymen, or agents of nurserymen, while they are merely unprincipled speculators, endeavoring to live and fatten upon the credulity of the public and the well-earned reputation of honest nurserymen. The man who buys trees from any one, without demanding the most satisfactory evidence that he is a reliable and responsible nurseryman, or the agent of such, deserves to be cheated, and we have no sympathy for him.

PEARS FROM BOSTON.—Herewith I send you, from Messrs. CURTIS & LINCOLN, a sample of *Easter Beurre* Pears, such as they have exhibited of late at our Society. Mr. CURTIS listened to the remarks made by yourself and Messrs. JOSIAH STICKNEY and B. V. FRENCH, at the time the Pear was under discussion, during the holding of the Pomological Convention in this city, and thinking you were not so favorably impressed in regard to this variety, has requested me to forward these, that you may test and report on the same. Such Pears readily sell at from two to five dollars per dozen. EBEN WIGHT, *Chairman of Fruit Committee.—Boston, Mass.*

Dr. WIGHT and Messrs. CURTIS and LINCOLN will please accept our thanks for the box of Pears. They were well ripened and delicious; but Mr. CURTIS is mistaken in regard to our opinion of the merits of this fruit, as he will see by referring to page 158 of the proceedings of the last session of the Pomological Society.

DR. WARDER, of Cincinnati, passed through Rochester, on the 24th of February, on his way to the annual meeting of the National Agricultural Society at Washington. He informed us that when he left home, people were *planting Peas and Potatoes.* Here we had from one to three feet of snow, with the thermometer, off and on, about *zero!* The Doctor, by the way, is trying to resuscitate his magazine; and we hope he will succeed. Men who display such courage, deserve success.

THE PENNSYLVANIA HORTICULTURAL SOCIETY has issued its schedule of premiums for 1855. Will the editor, at his earliest convenience, examine it for the benefit of his numerous readers?

With pleasure; but we have not received it. Indeed, we seldom receive an account of the proceedings of horticultural societies until they are too stale to be of much interest. If societies are not disposed to give their doings publicity through a proper medium, it is their loss more than ours.

TOWNSEND GLOVER, Esq., is at present in Philadelphia, engaged in preparing figures to elucidate the depredations of insects on fruit trees and other plants, for the Patent Office.

THE GREAT FRENCH EXHIBITION.—The following circular has just been placed in our hands by Col. JOHNSON. It is not likely that any display of American horticultural productions will be made at Paris. Collections of fruits might be sent towards the close. The agricultural department can be well represented in grains, implements, &c.

B. P. JOHNSON, ESQ., *Cor. Sec. N. Y. State Agricultural Society*—

Dear Sir: Just now I have received a circular from the Committee of Organization appointed by the Imperial and Central Horticultural Society of Paris, of which the following is a translation:

"Sir—The horticultural products cannot be admitted at the Universal Exhibition—it being exclusively devoted to the productions of Art and Industry; but the Government authorized the Imperial and Central Horticultural Society to make an appeal to all horticulturists, both French and foreigners, and to organize, from the 1st of May to the 31st of October, a permanent and universal Horticultural Exhibition.

"In consequence, the Society is preparing, at the *Champs Elysée*, a vast garden with spacious green houses, where the products destined for the exhibition will find all the material accommodations, as well as all the attention, required for their preservation.

"The Society's appeal addresses itself to all the branches of cultivation—plants, flowers, fruits and vegetables, from all climates, as well as to all the agricultural productions so intimately connected with horticulture.

"The Society will be glad to receive the industrial productions destined for horticulture.

"At the close of the Exhibition, rewards will be distributed to those selected by the jury.—The general regulations will soon be published. Meanwhile the Society requests all the horticulturists and amateurs to inform them as soon as possible in respect to the following:

"1st, Of the nature and quantity of the products they destine for the Exhibition.

"2d, The time at which these products may be forwarded, and how long they will be allowed to remain on exhibition.

"3d, To give all the information which they may think necessary.

"Signed, THE PRESIDENT OF THE COMMISSION.
COMTE DE MORNY, *President of the Corps Legislative.*
MAUNY DE MORNAY, *Chief of Agricultural Department.*
L. VILMORIN, *Horticulturist.*
VURHER, *Chief of Division at Department of Emperor's Household.*
LEON LE GUAY, *Secretary of the Commission*
CH. MERAU, *Secretary General of the Department of the Seine, &c.*"

CUTTING WILLOWS.—In your February number I was very much pleased to see the communication of MR. SAUL on the "Cutting of Willows." Last spring I procured of Dr. GRANT and others, fifty thousand cuttings of three varieties, (*triandra*, *Beveridgii*, and *Salix viminalis*), and planted them on a piece of low land, composed of muck resting on a subsoil of clay. Although the season was very unfavorable, yet I cannot but be satisfied with the growth—some of the "rods" growing over nine feet from the cuttings. I think Mr. SAUL's views with regard to the cutting are right; yet I can not agree with him as to the manner of planting. DOWNING recommends planting in drills three feet apart; the plants to be set at an angle of about forty-five degrees, from twelve to fourteen inches apart. Mr. SAUL's method would take far more land, and a longer time to cover the ground—requiring more labor to keep down grass and weeds. I cut about one-third of the stools last fall down close to the ground, and the residue from four to twelve inches; also covering up the stools of part of those cut level with the ground with about two inches of soil. My object was to ascertain which was the best method of cutting.

Willows will grow on any soil. True, they will; but they will not "pay." They require a wet soil, and as much attention as a crop of corn the first two years—after that, a hoeing in the

spring to keep down the weeds, until the stools have spread to cover the ground. But Willows have an enemy, as well as other plants, when planted near a stream of water. The musk rat will do the "cutting" in good season. I had, during the last year, about half an acre destroyed by them — cutting off rods half an inch in diameter — all done in the night.

It would gratify me and others, if some one of your correspondents would inform us of the best method of preparing the rods for market, and where a market can be had. I have a large lot of rods that would answer to make up. I can sell them to a German basket-maker, but he calculates to get them for a song. A friend of mine who had an acre planted three years ago, sold the whole crop for $25 — over two tons. I asked him why he did so; his answer was, "I did not know what to do with them." JOHN H. CORNING.—*Kinderhook, N. Y.*

Several cultivators of the Willow have recently complained to us of the difficulty of finding a market. This is not surprising. It is a new business, and has not yet been reduced to a system. As soon as the culture has become sufficiently important, we shall have persons who will engage in the business of preparing them, supplying them to manufacturers, &c. The consumption of willow ware in this country is very great. In all our large cities, there are houses engaged solely in importing Willows; and a very large share of the money we send to Europe for them, might just as well be kept at home. We are glad to see the business attract so much attention, and hope cultivators will persevere until it gets established on a proper basis.

DROWNING THE CURCULIO.—A friend of ours has deliberately laid a plan for drowning the Curculio! He says:

"I propose to lay out a Plum orchard on a dead level, as near as possible to a pond or spring, and inclose it with a sort of dam, say a foot high, having two sluices — one to let the water in, and the other to discharge it; the water to be conducted from the pond or spring by means of a ditch or pipe. In due season I will let in the water around the trees, to the depth of two to six inches, then shake the trees well, and instantly let the water rush out, having the sluice large. This operation should be performed daily for at least three weeks. A sort of seine or netting might be fixed at the outlet, so that all the scamps might be caught and killed. The water will by no means injure the trees. I have seen thousands and scores of thousands of Plum trees on low, swampy grounds, on the very edge of streams, ponds, and rivers, in Germany, and they are both healthy and productive. Indeed, a Plum tree can live where no other fruit tree can, except perhaps the Quince and Filbert. This strikes me as the most effectual means that can be adopted where the water can be had. The work will not require more than at the rate of one man five minutes for twenty trees."

We should be glad to have this experiment tested; but it seems to us that flooding the soil in which trees were growing, every day for three weeks, could scarcely fail to injure the roots, unless the water were to pass off very quickly indeed, and the soil be of a very porous nature.

FUNGUS BLIGHT.—I notice, in the October number of the *Horticulturist*, a note from Mr. DOWNER, in regard to a disease which has lately attacked his Apple and Pear trees. I send you a twig from one of my Pear trees, affected, as I presume, with the same malady. I have termed it the *Fungus Blight*, from the fact that it seems to owe its existence to the deposition and growth of a peculiar species of *fungus* upon the under side of the smaller limbs or branches, from which it extends along the *under* side of the leaf-stalk and leaf, turning it of a dark brown and then a black color, as far as it progresses, till all the foliage of the branch above the point of attack is entirely destroyed. Nor does it stop here; for if a fruit comes in its way, it will proceed along the stem until it reaches the fruit, and then spreads over its base and *shaded* side, entirely stop-

ping its growth. The fungus generally begins in or near the bifurcations of the larger limbs, and progresses very slowly along its under side, seeming to avoid the light and heat of the sun as much as possible. Its course is marked by numerous little brown semi-globular specks about the size of a pin head, and between these and in advance of them extends a fine silky tissue, which may be easily separated from the branch, leaf, or fruit, after being saturated with moisture, as is frequently the case after a rain.

This disease shows itself usually early in the summer, and progresses with various degrees of rapidity according as the season is a dry or a wet one. In a dry summer, like the past has been, it will not probably advance more than from six to twelve inches; in wet seasons I have seen it extend to half as many feet.

The only injury *perceptible*, is the destruction of the foliage and fruit. I have no doubt, however, that it also injures the bark and alburnum of the branches along which it extends.

Remedy—frequent washings with soft soap. H. A. Swasey.—*Yazoo, Miss.*

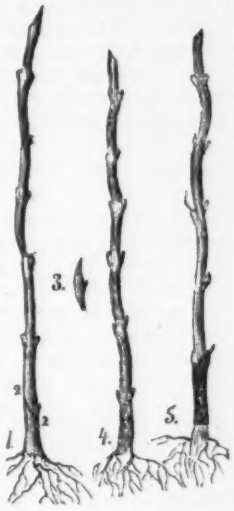
The shoot accompanying this note would appear, at first sight, to be covered with Scaly Aphis; but on close inspection it proves to be a sort of corky fungus formation, unlike anything we have ever seen on the bark of trees before.

Ripening of the Catawba Grape.—The ripening of the *Catawba* Grape is very uncertain in this latitude. About one year in three the average temperature is sufficiently high, and the season sufficiently long, to make the fruit worthy of cultivation. The vine may be ornamental, when trained over a tasteful arbor in the open garden; but we can not forget that the most valuable property of a Grape vine is its *fruit*. The writer of this has made use of a partial protection, with gratifying success. I proceeded as follows:—The vines, two years from the bud, were planted three years ago, and had fruited two years. They were planted about eight feet from a board fence eight feet high. Rafters were then erected, at intervals corresponding with the width of such sash as was designed to be used. I used in part the *out side* or duplicate sash of my dwelling house, which could be spared on the first of April. The ends of the house were closed up with common boards, and the roof covered tight with boards at the top for about three feet. On the first of April I laid on the sash, and removed it about the first of June. At that date, the vines were taken from their reclining posture under the rafters, and tied up to a trellis of wire, erected for the purpose, a little in advance of the position of the vines, so that they might have a full exposure to all the external influences of nature. This exposure is very essential to the health and vigorous growth of our native Grapes in summer. Nothing else out of the common course is to be done till there is danger from frost, or a severe north wind and fall of temperature approaching a frost. Last fall I unfastened the vines from the trellis, and secured them under the rafters, and replaced the sash, about the 10th of October. This secured them against the first reverse of temperature; and on the return of sunny, warm days, the sash was partially removed, to give them air. With this treatment, the maturing process went on in a most admirable manner, and the flavor of the fruit was all that could be asked for.

A few words about "Peaches under glass." I made an experiment in a small way, as a matter of amusement. I planted a few young trees on pieces of matting, in the vinery. The vinery was subjected to a gentle forcing by artificial heat, and the trees were, about the 20th of May, removed carefully into the open garden. The roots were not disturbed, and the growth not checked. Several Peaches succeeded and ripened about a week before the usual time. But, (as your correspondent in Utica will find,) the great evil will be, the *feeble state* of the impregnation. The air in the house is not fresh and tonic; and if the house be thrown open to ventilate, to a great extent, the temperature will be too far reduced, and the fruit blasted. If Mr. Barker wishes to pursue the subject, he may find some good suggestions in the article "Horticulture," in the *Edinburg Encyclopedia*. A. Messer.—*Geneva, N. Y.*

The best way to graft Grape Vines.—Having had some experience in grafting the vine, I am desirous of informing your readers of my mode of procedure. I have visited several vineries in this State, and having had conversation with the proprietors, I have learned from them how very important it would be to grape-growers to be able to change one variety for another by an easy and sure way of grafting.

My practice is as follows:—I try to have the eyes of my stock and scion swell at the same time. This I do by putting my scions in wet sand, and leaving them in the vinery. As soon as the eyes move, I take a sharp knife and cut my scions wedge-shaped, leaving only one eye. I next take my knife, holding the point down, making an incision in the stock as at 2, 2, fig. 1; the scion is cut as at fig. 3. I then fit my scion into the stock, as at fig. 4, being careful to have the bark of both in close contact. I next tie with strong bass mats, and cover all over with grafting wax, as at fig. 5, to prevent air and moisture getting to the incision.



This mode of grafting has the advantage of having the stock bearing fruit while the scion is making bearing wood. I have worked two vines this season, in the forcing-house of Mr. Joseph Breck & Son, and they are beginning to grow.

I am willing to give any information that may be required concerning the above description. Bonnard Denis.—*Brighton, Mass.*

Osage Orange Hedges.—Lately I have seen miles of attempts at Osage Orange hedges in Illinois. It seems to me Osage Orange promises little, if any, better than the Honey Locust.—Both are by nature trees; both seem to be resolved to be trees or nothing. Hedges can be readily made of either, that will turn cattle for a while, and, except *just a little fixing*, hogs too. But in a few years the large trees have killed the small ones, and then cattle and hogs go through. Top-pruning may retard this event, but not stop it. Root-pruning might help, but for most farmers I doubt its utility. Who has seen an Osage Orange that for ten, five, or even three years, has been kept a good fence? Let us hear! E. Nichols.

Our friends in the West will let us hear. Meantime we will say that, although both the Osage Orange and Honey Locust are trees, they can, by proper treatment, *both* be made into good hedges. The Thorn is a tree, yet who will say that it cannot be grown into a hedge. Friend Nichols is mistaken, we think.

The Diller Pear.—I regret that I am obliged, in justice to myself, to address a few lines to you, Mr. Editor, for publication in your journal, in reply to some remarks that Mr. C. M. Hovey has thought proper to make, on the 59th page of the *Magazine of Horticulture* for the present year, viz:

"Diller Pear.—Two years ago, this was thought one of the finest Pears. Mr. Walker, of Roxbury, then declared that the 'sight of it was enough to make your mouth water.' We never saw it. It is now rejected from the list that promise well. How a Pear in two years could fall off from 'one of the best Pears ever tasted' to a rejected variety, is somewhat surprising to us."

Now, Mr. Editor, it having been the pleasure of Mr. Hovey thus to bring my humble self before his readers, with the intention, as it appears to me, to show that I was ignorant of the qualities that constitute a good Pear, or that I made a statement which I knew was not true; and further, that as Mr. Hovey has not given all the facts in the case, but has designedly, I

think, omitted important parts of the records; I can not remain silent, although I assure Mr. HOVEY I have no desire to enter into any controversy. I shall therefore give the facts, as I find them recorded in the published proceedings of the American Pomological Society, together with such other brief remarks as I may think necessary; and leave the matter with other persons who may be as competent to judge of the *Diller* Pear as Mr. HOVEY or myself.

Early in the session of the American Pomological Society at Philadelphia, on the 13th of September, 1852, (p. 16, Transactions of 1852,) the following gentlemen were appointed the Committee on Synonyms, viz: Messrs. WALKER, of Massachusetts; HOVEY, Massachusetts; BARRY, New York; YOUNG, Kentucky; DOWNING, New York; SAUL, New York; and ERNST, Ohio. And to facilitate the duties of the committee, the members of the society were requested to place in the committee-room specimens of all the fruit on which they had any doubt as to their true names. Dr. ESHLEMAN placed before the committee specimens of the so-called *Diller* Pear. The Pear was unknown to all the members of the committee; but, after tasting it, the Pear was pronounced "best."* I recollect how the juice of this Pear followed the knife, as I cut it up for the committee; and it was with these impressions fresh on my mind, and the refreshing nectar still on my tongue, that I gave utterance to the expression, "A sight of it is enough to make your mouth water." But I am going too fast. On the 36th page of the Transactions of 1852 will be found as follows:

"Dr. ESHLEMAN, of Pennsylvania—I move that the *Diller* Pear be placed on the list as worthy of trial. Report says it was imported from Germany by the DILLER family many years ago, and the tree is still standing.

"Mr. WALKER, of Massachusetts—A sight of it is enough to make your mouth water. I am ready to state it is one of the very best Pears I ever tasted; and am also pleased to state it is a native of Pennsylvania.

"Mr. SAUL, of New York—That was the unanimous opinion of the whole committee, and several other gentleman who were present.

"The question being put, the affirmative vote was unanimous."

The next account we have of the *Diller* Pear, is from the State Fruit Committee of Pennsylvania, signed by THOMAS P. JAMES, (Proceedings 1854, p. 84.)

"*Diller*.—From Dr. J. K. ESHLEMAN, Lancaster county. Flesh—somewhat granular, buttery; possessing a fine perfumed flavor. Quality—very good."

At page 141 we have as follows:

"Dr. ESHLEMAN, of Pennsylvania—It [the *Diller* Pear] has not sustained the reputation it formerly had. It is much less in size, and apparently quite different. The branches are disposed to be blighted in spots. I have my doubts about its success in general culture. It has uniformly sustained a high reputation in its neighborhood.

"Mr. HANCOCK, of New Jersey—I have the Pear. The tree cankers very much in the wood. Occasionally it is very good.

"It was voted to strike it from the list."

This vote of the society removed the *Diller* from the list that *promise well*, but it by no means places the *Diller* as "a *rejected variety*," but leaves the Pear where we found it, in the hands of its friends. If I correctly understand the remarks of Dr. ESHLEMAN and Mr. HANCOCK, their objection to the *Diller* was rather to the *canker of the wood* than to the *fruit*. I spoke of the *fruit* of the *Diller*; so did the *whole* committee, including Mr. HOVEY; and so did the several gentlemen who were present with the committee, and tasted the fruit.

The very captious and imperfect manner in which Mr. HOVEY has thought proper to introduce the *Diller* Pear to his readers, and indeed such other parts of the proceedings of the American Pomological Society as he has thought proper to publish, constrains me to make some further remarks.

* We remember very well tasting this Pear in the committee-room at Philadelphia, and considered it justly entitled to rank as "best."—ED.

If I had over-stated the qualities of the *Diller* Pear, or had the committee (of which Mr. HOVEY was a member) over-rated it, and the gentlemen who tasted the *Diller* had erred in their judgment,—if we had all been mistaken—and the facts prove we were not,—I ask, should these opinions, freely and honestly expressed, before friends, have been the subject of censorious comments? I think not. Mr. HOVEY, however, has thought and acted otherwise. I therefore feel at liberty to introduce to the notice of Mr. HOVEY the following statements made by him, which may now appear as *surprising to him* as they ever have appeared "*surprising to us.*"

In the magazine published by HOVEY & Co., I find the following descriptions by Mr. C. M. HOVEY:

Madotte Pear.—"Large size, beautiful in form and color; even superior to the *Duchesse d' Angoulême*, as M. MARZAH informed Mr. KENRICK. It is equally as large as the latter variety, but not so broad, and of finer form."—*Vol.* 8, *p.* 166.

Boucquia Pear (with an outline).—"Flesh—yellowish-white, tender, melting, sweet, and rich. Flavor—high, perfumed, delicious."—*Vol.* 9, *p.* 134.

Las Canas Pear (with an outline).—"It has much of the character of the *Tyson* and *Rostiezer.* Flesh—yellowish-white, fine, melting, and very juicy. Flavor—rich and saccharine, with a high, delicious aroma."—*Vol.* 15, *p.* 197.

Locke Pear (with an outline).—"The *Locke*, like many other native sorts, has been forgotten, and its place usurped by foreign varieties not possessing a tithe of its merits. Flesh—yellowish-white, coarse, melting, and juicy. Flavor—rich, sweet, perfumed, and excellent."—*Vol.* 15, *page* 342.

I have a list of several other varieties of Pears equally as well described by Mr. HOVEY as fine, delicious, &c., which, together with the *Madotte, Boucquia, Las Canas*, and *Locke*, have found their *proper places*, by the votes of the American Pomological Society, in the list of "REJECTED FRUITS." SAMUEL WALKER.—*Roxbury, Mass.*

DECEPTIVE ADVERTISEMENTS.—There is a subject that calls for the special attention of all purchasers from nurseries, but which has hitherto received no notice whatever; it is the consummate *humbuggery* practiced by some nurserymen in their advertisements—men who have actually next to nothing in their so-called nurseries. Having repeatedly seen the lengthy advertisements of a certain nursery, some of which occupied a whole page, we visited the establishment in September last, and, although previously told that we "would be likely to inquire for the nursery when standing in the midst of it," yet our amazement was greatly enhanced by our actual view of the premises. We were utterly astounded at finding but three or four acres of decrepid trees, mostly natural stocks, and every part of the grounds overgrown with weeds, except some borders near the dwelling.

We could add very much more, but our object is merely to call your attention to this point. We suggest that the Agricultural Society of our State, or the American Pomological Society, appoint a committee to visit and inspect all the nurseries located in the Middle and Eastern States, and report upon their actual condition; and, in doing so, to inspect the records of each nursery, so as to enable them to report also upon their system, order, and accuracy.* If this be properly done, every person engaged in the business will receive the award to which his industry is entitled, and nurseries *de facto* will be distinguished from nurseries on paper.

We could name to you a most worthy nurseryman in Illinois, (a beginner only, who was literally robbed of about $2,000 last spring, by nurserymen (so-called) who, not having the articles he wanted, palmed on him a lot of trash which, he states, was, for the most part, erroneously named, and so badly packed that he saved next to nothing from his purchases. WM. R. PRINCE & Co.—*Flushing, N. Y.*

* This is a very good suggestion, and we wish it were carried out.—ED.

To Cream Hill.—Thanks for your chivalrous taking up the gauntlet in behalf of "women's pens and tongues." Do we not need some able championship to parry the shafts of satire, sometimes ruthlessly winged by merciless marksmen? The pain of one invidious arrow is amply atoned for in the present instance, by an unknown knight, who all unexpectedly steps forward in our defence.

That "ungallant remark," is made to reveal an opinion of which I might otherwise have remained ignorant. Diffidence, and consciousness of deserving *the hint*, forbade any attempt at excuse, even by the assertion that Atticus' letters were so suggestive that only half the thoughts they evoked found expression.

Now allow me to defend Mr. Barry against your "hard thrusts." Mr. Barry, though not altogether felicitous in expressing himself, was right in so far as that letter was concerned. It doesn't do for editors to be too tender-hearted. It behoves them to take into consideration the general good of their readers in preference to the personal feeling of individual contributors. They must needs whip about their criticisms sometimes seemingly unmerciful, in order to keep the vast horde of writers not only wide awake, but in their places. When people don't do as they should, they mustn't always expect to be told of it with gracious suavity. Editor's thoughts, like other people's, will sometimes out, just as they are prompted, unmellowed by circuitous softness. This outright-spokeness is doubtless a good thing, since often nothing like a little knocking about so develops some people's energies, and wakes up their wits, (not necessary in our case, however.)

Mr. Barry has already disproved your supposition of the obtuseness of his *appreciative* faculties, and has invited this pen to make itself useful. Usefulness, like charity, "should begin at home." After "good works" in this my sphere have well nigh exhausted the energies, my "willing spirit" would benevolently extend the residue thereof to others, if to them it may be made either pleasurable or useful.

Mr. Barry, feeling assured that *he* hasn't hushed this pen into silence, guesses that some "special cares" must absorb my time. "Where there's a will there's a way," and the heart and hands are seldom so crowded with duties but still another, if agreeable, may be added. One may not elongate *time*, like a gum-elastic band, to compass desired undertakings, but is it not vastly strengthening to one's powers to expand the capabilities by strong endeavor—to exercise the genius in concentrating effort and duties—till a dozen are finally performed in the space one formerly occupied?

Thanks for your hearty invitation. Mrs. Hill and I would doubtless get on famously in the exercise of our "women's tongues." In chatting with that "respectable aggregate," the public, one can only skim the surface of heart and feelings. Cold, superficial, or inexperienced in life's lessons, must the heart be that holds not in reserve something deeper, warmer, truer, than it reveals to a "great and unknown community." The delightsome pleasure of diving into those deeper recesses, is reserved for congenial *tête-à-têtes*. Enthusiastic pleasure do agriculturists, pomologists, and florists, evince, as they commune and interchange ideas and experiences. So do we mothers and housewives, as we recount the efforts and failures, the trials and successes, of our particular fields of labor. Right creditable and noble might the revealing of these hidden depths be to our womanly natures; but while the diatribes of the aforesaid personages may be published to the world, many of our discussions and delineations, though involving the well-being and comfort of a good portion of that world, may only be disseminated in our cozy chats.

It is one of the pleasant things of this pleasant world, to make friends and keep them. One of these years, when the anticipated *resting* time comes, I may call on my far-away friends; and shall I number among them some to whom this little pen has introduced me? Not slight efforts would I make to commend myself to the possessors of the "little bright eyes" that enliven humble homes, beautiful homes, and happy homes.

How gladdening to eyes long accustomed to the newness of western things, to visit once more those older and more cultivated portions of our country, where time and wealth have produced

perfect results in attainments which here are yet in a state of promising infancy. Pleasant it will be to jaunt from one beautiful spot to another—to visit homes where circumstances, taste, and refinement, conspire to render them externally lovely—to roam through orchards, nurseries, gardens, conservatories, and green-houses, that are models of their kind, meeting the beautiful ideals that haunt my memory and fancy. Returning, do you imagine our "settler's home," and this our adopted State, will seem less dear and lovely? Then you know not what a fair spot it is. I give you credit, however, for a heart that can understand that loveliness may exist independent even of *place* and external beauty—a loveliness sometimes found in palaces of beauty and pride, and sometimes in the plain and humble abode.

Now, Mr. BARRY, don't hint aloud that I have said "too much on one topic," or anything quite so *spicy*. Don't print letters "to ELSIE," and then you will be spared the infliction of her answers. ELSIE.—*Woodside, Waukesha, Wisconsin.*

Notices of Books, Pamphlets, &c.

CATALOGUES AND PAMPHLETS RECEIVED.—*Catalogue of a fine collection of Floricultural, Vegetable, and Agricultural Seeds, comprising assortments of the most approved varieties in cultivation, to be had of* CURTIS & LINCOLN, *Horticultural Exchange, Hayward Block, 348 Washington street, Boston.*—An excellent catalogue, which gentlemen who desire choice seeds for either field or garden, will do well to examine.

Catalogue of Choice Verbenas cultivated and sold by DEXTER SNOW, *Chicopee, Mass.* 1855.—Mr. SNOW's catalogue of Verbenas is the first devoted exclusively to that flower we have seen, and is well worthy the attention of the cultivators of this popular bedding plant.

R. BUIST's *Catalogue of Select Roses, cultivated and for sale at his Nurseries, Rosedale, Darby Road, two miles below Gray's Ferry. Seed Warehouse, No. 322 Market street, Philadelphia.*—Mr. BUIST's name is familiar to all cultivators as a "household word," and his catalogues are always up with the times. We see on his lists the best new Roses.

Catalogue of Annual, Biennial, and Perennial Flower Seeds. Also, *Catalogue of Vegetable Seeds. By* ALFRED BRIDGEMAN, 874 *and* 878 *Broadway, N. Y. Garden and Green-Houses, Astoria, L. I.*—This is the season of the year when seed catalogues are referred to, and these offer very complete lists.

Directions for Planting and Cultivating the New Rochelle or Lawton Blackberry. By GEO. SEYMOUR & CO., *Norwalk, Conn.*

Cranberry Culture. Directions by F. TROWBRIDGE, *New Haven, Conn.*

Answers to Correspondents.

(Mrs. A.) THE MARRON, OR LARGE CHESTNUT.—We are much obliged for the extracts, but the statements are incorrect. The Wild Chestnut does not become a "Marron" by grafting, nor is the grafting performed in the manner stated. It is difficult to graft.

(J. H., Westchester, Pa.) "THE GARDENERS' MAGAZINE."—We have not seen this journal since the notice you refer to. You had better address the publisher, Mr. W. S. KING, again. It is possible that your letters and remittances have miscarried.

(W. P. S., West Amesbury, Mass.) Leather Shavings for Fruit Trees.—We do not believe that the leather shavings had any influence in attracting the Borer to Apple trees.

(A Subscriber, Galt, C. W.) Root-Grafting Pears.—This can be done as well as the Apple, but is not much practiced, and we do not recommend it. If practiced at all, it should only be with *strong* growers, and by using the *whole* root, grafting on the collar.

(A New Jersey Subscriber.) Names of Trees.—We do not know any tree or shrub that bears the name of *Nannyberry*. Your description answers that of the *Kalmia* or *Mountain Laurel*—an evergreen. If you will send us a few inches of a branch we will be able to give you a satisfactory reply.

(M. P. L.) The Beurre d' Anjou Pear.—This is not "the *Beurre gris* re-christened." It has been known in most of the French and Belgian catalogues as *Ne plus meuris*. Le Roy's catalogue, and some others, have it among the synonyms of the *Brown Beurre*, which is a great mistake. We have received it from a French nursery as *Miel d' hiver*.

(A Subscriber, Whitinsville, Mass.) Double Sashes for Green-Houses and Vineries, instead of Shutters.—We think well of the plan. The first cost would be the chief objection, but there would be a great saving of labor and trouble in putting on and removing shutters. The effect on the vines or plants would, we think, be more beneficial than otherwise. We have thought of trying it on some of our own plant-houses.

(P. M., Merwinsville, Conn.) The Augusta Rose.—It is not "perfectly hardy." Without protection it would be killed to the ground, either in your State or this.

Isabella Grapes.—See that the soil is perfectly free from stagnant moisture, and fork in around it some old well decomposed stable manure and a few broken bones or shells. Water occasionally during summer with soap-suds.

(J.W.G., Hillsboro, Ohio.) Insects.—The Borers sent us are not the Apple tree Borer described in the books, (*Saperda bivittata*,) but, as Dr. Fitch informs us, a larvæ of the *Buprestis* family, probably the *Chrysobothris femorata*, or thick-legged Snapping Beetle, which, Dr. Fitch says, you will find on your trees next June. Try to get some, and send us specimens. The remedies usually recommended for the Borer will apply to this.

(R. G. C., Wellington, C. W.) The Diana Grape.—The *Diana* is an excellent Grape, resembling the *Catawba*, not so large, but ripening full two weeks sooner. It can be had in most of the nurseries, and especially around Boston, where it has been more extensively propagated. The stock is small, partly because of the demand, but more on account of being more difficult to propagate by eyes or cuttings than most other hardy varieties.

(D., Hamden, Conn.) To raise Norway Spruce from Seed.—Prepare a bed or border six or eight feet wide, soil light sandy loam; rake perfectly level, and sow the seed broadcast about twice as thickly as you would Apple or Pear seed; then cover with fine sifted soil, light and sandy, about one-quarter to one-half an inch deep; press it down lightly with a board, or the back of a spade, so that it will look as if rolled, and then give it a good watering. The next thing is to provide for shade—a protection from the mid-day sun. The easiest and most effectual way to do this, is to surround the bed with a frame of boards on their edge, rising some twelve inches higher than the surface; nail on some cross pieces, and stretch over it during the hottest part of the day an awning of common coarse sheeting. To manage this shade, and water when, and only when, needed, is all you can do to secure a good crop. If any of these points are mismanaged but a little, you will probably fail. Manage all evergreen seeds the same way. We can not recommend you a book on the subject that is reliable.

(J. D., Warren, R. I.) GRAPERY.—Vines can be obtained at any of the nurseries, at fifty to seventy-five cents each. Any nurseryman will send you a priced list. We never recommend. The border may be partly inside and partly outside, or all outside if more convenient. The water should be pumped into a barrel or tank a few hours before it is used in watering the inside border; but we do not think it would do any serious harm to pump directly from the cistern upon the border. A good border may be made by putting a layer of broken bones, shells, &c., six inches deep in the bottom, and filling with a compost of about three parts of turfy loam from an old pasture, and one of well decomposed stable manure.

Chorlton's Treatise can be had of SAXTON, in New York.

GRAFTING EVERGREENS.—Grafted evergreens are generally not of much value. The Spruces may be grafted on one another, not on Pines.

WE wish to obtain a description of the size, color, and quality of the following varieties of Plums: 1, *Italian Prune;* 2, *Norman Perdrigen;* 3, *Sugar;* 4, *Belle de Riom;* 5, *Large Red Thoulouse;* 6, *Merveille de New Kent;* 7, *Cruthrie's Topaz;* 8, *Lewistown Egg.* We have examined all the works on the subject in our possession, but can find no mention of them. We might, we presume, get all the particulars from the nurseryman from whom we obtained them, but we have already been sufficiently "tricked" by him, to destroy all faith in the correctness of any description he might furnish us. AN OLD SUBSCRIBER.—*Hamilton, C. W.*

The only one in the list which we can speak of from experience is the first. *Fellemberg, Italian Prune,* and *Swiss Prune,* have proved identical with us; a large oval, dark bluish purple Plum, of excellent quality; tree, a stout grower, of low, spreading habit, and very productive. Nos. 3 and 8 are American sorts, which we have only heard of. No. 7 is an English or Scotch sort, found in the English catalogues and described "a late, yellow, good Plum." Nos. 2, 4, 5, and 6, are strangers to us, even in name. Will some one else supply the information?

PERMIT me to ask you two questions I anxiously desire to have answered.

Will the Norway Spruce shear handsomly for a hedge four or five feet high? Have you ever seen a specimen? (1) What is a good hardening substance for paths on a sandy soil, in lieu of gravel, which is very scarce here? (2) Coal tar is easily procured. Can a good path be made by mixing it with sand? A SUBSCRIBER.—*Springfield.*

(1) The Norway Spruce bears the shears as well as the Arbor Vitæ. We have frequently seen trees shorn, but not hedges.

(2) You can no doubt make a good hard walk with coal tar and coarse sand; but we can not recommend it. The color will always be disagreeable, and if concealed by a thin coat of gravel on the top, the walking will not be pleasant. With a foot deep of small stones in the middle of your walk, a thin coat of gravel will suffice. Walks made of tar and gravel, or any of these materials, which form a concrete, are good on hill-sides, where gravel washes by heavy rains. Considering the influence that a good gravel walk has upon both the beauty and comfort of a garden, it is worth while to incur some trouble and expense to secure it.

GRAPES.—I wish you would tell me if you know what to do with my Grape vines. They are of the *Isabella* and *Catawba* varieties, planted in not very stiff clay, or red soil. I have tried every experiment, and worked them in every way recommended by the most approved cultivators, and yet can not succeed in getting a crop of Grapes. I have pruned them close and moderately; I have also suffered them to go without pruning; I have manured them in every way that I can think of — with fresh, and old stall manure — with muck, ashes, lime, plaster, bone-dust, and guano; I have worked them deep and shallow, and suffered them to grow without working; I have kept them clean, and left them in the grass; I have them in close soil, and in gravel — and yet I can get no fruit. They put out profusely, and grow off thrifty, every spring — are loaded with fruit until it obtains its full growth, and promises an abundant crop, and then begins to rot. A black speck first makes its appearance, and then spreads rapidly, until the whole become perfectly black, and then drops or dries up on the vine — most commonly the latter. What do not take that course, remain on the vines perfectly green until near Christmas, and then gradually dry up. Last fall the larger portion of my crop was in that condition — so fair and flourishing, apparently, that I did not despair of their ripening, until winter fairly set in. I have searched various works to find something on the subject, but have found nothing to throw any light on it. If such a state of things has ever come under your notice, and you can give me any information on the subject, it will be thankfully received. J. C.—*Hanover Co., Va.*

We submit this case to our readers; perhaps some of them may have had similar experience and found a remedy. For our own part we think the chief difficulty lies in the soil. A *red clay* soil is not suited to the Grape.

(W. W., Wyalusing, Pa.) INSECTS.—It is some sort of a Borer. We have taken steps to ascertain.

ARBOR VITÆ HEDGES.—What distance should Arbor Vitæ be set apart to make good hedges and screens? What height would the hedge attain when so planted? L. M. F.—*St. Paul, Minnesota.*

Plant a foot apart; two feet will do, but the effect will not be so speedily attained. For a high screen, perhaps the latter distance will be better, as it will give the roots more space to spread in. You may have it twenty feet high for shelter; for an ornamental hedge, five feet is enough.

MACHINES FOR MOWING LAWNS.—In the April number of the *Horticulturist* for 1852, a communication from "a Montreal Subscriber" is published in reference to "Mowing Machines for Lawns," he represents as doing the work in a superior manner, and very expeditiously. He gives what he calls a cut and description of an English Mowing Machine for Lawns, furnished by Messrs. SHANKS & SON, of Asbroath, New Brunswick. But little idea of its construction, operation, or utility, can be gathered from either, further than that it is made to cut different breadths, from twenty to forty-two inches, performing three different operations at the same time, viz: rolling, mowing, and collecting the grass, and works with perfect ease, producing a beautiful smooth surface, and is attended with a great saving of labor. We will all agree, I presume, that if there was an article for mowing lawns which could be obtained at a moderate price, that would do its work well and expeditiously, it would not only be of great utility to many who are endeavoring to keep extensive grounds in order with the scythe, but would probably induce hundreds of our friends to have their grounds in good keeping, who are deterred by the time, expense, and trouble now required for that purpose.

And now Mr. EDITOR, will you or some of your correspondents be so good as to put us on the right track for obtaining the most desirable article of the kind for the above purpose now in use. A HARTFORD SUBSCRIBER.

Horticultural Societies, &c.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The last stated meeting of this Society gave general satisfaction. The display was very good—collections from four green-houses were shown. In Mr. Buist's there were several new and interesting plants—the Dendrobium Wallichianum, Azaleas Iveryano, and Geranium Snowball, a beautiful Rogeira thrysiflora, and an exquisite seedling Camellia—a white, tinted with rose. In Mr. Fahnestock's, were a very graceful Accacia probiscens, Camellias, and other choice plants. In Mr. Tucker's, several species of beautifully trained Kennedyas, Azalea pallida, (new,) and a dozen handsome seedling Cinerarias. Mr. Raabe brought a seedling white Azalea, and vases of Hyacinths. Mr. Mackenzie exhibited Camellias, a new seedling of a rosy pink color, his Ellen and Reine des fleurs. Cut Camellias of the finest varieties were exhibited by Mr. Buist's, Mr. Cope's and Mr. Lambert's gardeners. D. R. King's gardener presented a large Moss Rose, bearing a fine pyramid of flowers. Six beautiful baskets of cut flowers were shown by the gardeners of Mr. Baldwin, Mr. Cope, Mr. Tucker, and Mr. Lambert. A brace of Cucumbers from Mr. Tucker's, and a dish of Asparagus from Mr. Cope's houses, were on the tables.

The following premiums were awarded by the Committee on Plants and Flowers: *Twelve Cut Camellias*—For the best, to Robert Buist; for the second best, to Jerome Graff, gardener to C. Cope. *Collection of Twelve Plants*—For the best, to Thomas Robertson, gardener to B. A. Fahnestock; for the second best, to Robert Buist. *Collection of Six Plants*—For the best, to Wm. Thompson, gardener to J. Tucker. *Specimen Plant*—For the best, to Thomas Robertson, gardener to B. A. Fahnestock; for the second best, to Robert Buist. *New Plants*—A premium of three dollars to Robert Buist, for Dendrobium Wallichianum, Azalea Iveryana, and Geranium Snowball. *Table Design*—For the best, to Cornelius O'Brien, gardener to D. Rodney King. *Basket*—For the best, to Mark Hill, gardener to M. W. Baldwin; for the second best. to Jerome Graff, gardener to C. Cope. *Bouquets*—For the best pair, to J. J. Habermehl, gardener to J. Lambert; for the second best, to Jerome Graff, gardenar to C. Cope. For a splendid Seedling Camellia, the silver medal, to Robert Buist. *Special premiums* of one dollar each, for fine baskets, were awarded to Wm. Thompson, gardener to J. Tucker; to Mark Hill, gardener to M. W. Baldwin, and to J. J. Habermehl, gardener to John Lambert. The committee noticed a fine Seedling Camellia by P. Mackenzie; a dozen beautiful Seedling Cinerarias by John Tucker's gardener, and a fine Seedling Azalea and Hyacinths by Peter Raabe.

By the Committee on Vegetables—*Special premiums* of one dollar each, to Wm. Thompson, gardener to John Tucker, for a brace of Cucumbers; and to Jerome Graff, gardener to C. Cope, for a dish of Asparagus.

An interesting letter was read from Dr. Joseph Wilson, Jr., Surgeon of the U. S. Navy, from U. S. ship Supply, on Chinese horticulture.

On motion, ordered that the Special Committee to confer with City Councils on the subject of so arranging Lemon Hill grounds as to provide for the establishment of a Botanic Garden, be instructed to embrace also Hunting Park as an arboretum, and the general improvement of any other public squares.

The next annual Exhibition will very probably be held in tents, the 11th, 12th, and 13th of September.

Genesee Valley Horticultural Society.—The Annual Meeting of this Society was held on the 10th of February, H. P. Norton, Esq., of Brockport, President, in the Chair. The meeting was well attended, and there was a fair display of winter fruits. The following board of officers was elected for the current year:

WM. A. REYNOLDS, *President.* H. N. Langworthy, D. C. Greenleaf, N. Hayward, John F. Bush, James Upton, Asa Rowe, *Vice Presidents.* H. E. Hooker, *Corresponding Secretary.* J. Vick, Jr., *Recording Secretary.* J. H. Watts, *Treasurer.*

It was resolved to hold two exhibitions the ensuing year—the first in June and the second in September. Besides these, the Executive Committee were authorized to appoint such others as they may deem advisable.

The Fruit Committee were instructed to report a list of fruits for general cultivation in this locality, the report to be presented at the next annual meeting.

The following standing committees were appointed:

On Fruits—J. J. Thomas, H. P. Norton, Austin Pinney, P. Barry, Edward Frost, L. A. Ward, Charles Powis, Geo. Ellwanger, H. E. Hooker, Selah Mathews. *On Flowers*—C. J. Ryan, J. A. Eastman, R. Donellan, J. Salter, Wm. Webster, C. F. Van Doorn, James Frost. *On Vegetables*—Jas. Vick, Jr., Jas. P. Fogg, H. N. Langworthy, C. M. Hooker. *On Botany*—P. Cooney, Francis Trentman.

Mr. Webster having presented a model of a grape-house, or conservatory, with an improved method of ventilation, a committee was appointed to examine the same. The committee made the following report:

"We have examined Mr. Webster's model of a curvilinear-roofed vinery, or conservatory, and as far as we are able to judge, consider the mode of ventilation a great improvement. The whole design is worthy of the attention of persons who contemplate erecting such buildings. P. Barry, H. E. Hooker, J. Salter, *Committee.*

Brooklyn Horticultural Society.—The following is a list of the Officers of this Society for the year 1855:

JOHN W. DEGRAUW, *President.* John Maxwell, Stephen Knowlton, Henry A. Kent, Smith J. Eastman, John W. Towt, *Vice Presidents.* W. S. Dunham, *Treasurer.* Delos W. Beadle, *Corresponding Secretary.* Joseph Lees, *Recording Secretary.*

Committees.—*Executive*—M. L. Schaefer, Ira Smith, H. A. Graef. *Finance*—Joseph H. Lester, John A. Nexsen, A. J. S. Degrauw. *Library*—M. Arrowsmith, John Maxwell, H. A. Graef. *Premiums*—John W. Towt, George Ingram. *On Fruits*—J. E. Ranch, James Weir, William Poynter. *On Plants and Flowers*—George Gamgee, Joseph Lees, M. Brandigee. *On Vegetables*—George Hamlyn, D. W. Beadle, W. Park.

The United States Agricultural Society.—The last meeting of this society has given hope that it is to be a permanent and efficient organization. There was a large and influential representation of the agricultural interest, the proceedings were harmonious, and the discussions of an unusually important character. The great objects of the society seem to be fairly understood, and the country will regard it with increased interest. The annual meetings hereafter are to be held in January, and a great mass meeting is announced for 1856, to consult and lay plans for the future. Farmers, rally around this society, and around all societies whose objects are to ad-

vance the interests of your profession. Without your hearty support, they cannot serve you. Let this great meeting of American agriculturists in 1856, be such as we have not heard of before, and something will result from it worthy of being put upon record. We find the following in the *Germantown Telegraph:*

"The annual meeting of the United States Agricultural Society, convened at Washington on Wednesday last, Hon. MARSHALL P. WILDER, President, in the chair. A majority of the States was represented. The President opened the session with an excellent address, which was well received. Numerous committees were then appointed, and resolutions offered. In the evening GEORGE WASHINGTON PARKE CUSTIS, the only surviving relative of the WASHINGTON family, lectured on the agricultural character of his father by adoption — the Farmer of Mount Vernon. He was listened to with great attention and satisfaction.

"The society re-assembled on Thursday morning, and after receiving reports from various committees, elected officers for the ensuing year, as follows: President, MARSHALL P. WILDER, of Massachusetts, and a V. President from each State and Territory. Executive Committee—Messrs. KING, of New York; CALVERT, of Maryland; POORE, of Massachusetts; WATTS, of Ohio; JONES, of Delaware; ELWYN, of Pennsylvania, and WENTWORTH, of Illinois. WILLIAM S. KING, of Boston, was chosen Secretary, and B. B. FRENCH, of Washington, Treasurer.

"The reciprocity question, on resolutions offered by Mr. HOLCOMB of Delaware, was discussed at considerable length, and warmly, during the morning and afternoon session, with reference to its influence upon agricultural interests, and a series of resolutions were finally adopted, objecting to the doctrine of free trade for agriculture, and protection for other interests. Many valuable papers were also read and discussed.

"In the evening, the Hon. GEORGE P. MARSH, late resident minister to Constantinople, delivered a highly interesting lecture on the rural economy of Europe.

"Another session was held on Friday, which we were unable to attend, in consequence of being obliged to leave for home; but which, we are informed, was principally taken up in a continuation of the debate of the day before, on the reciprocity question. Resolutions were finally adopted calling on the agriculturists of the whole country to meet in convention in Washington, in February next, to determine for themselves what legislation is necessary for their preservation. A number of reports from committees were read, and after accepting invitations to visit several public institutions, the society adjourned.

"In the evening a large number of members called on Senator CLAYTON, to thank him for taking the position he did the day before in the Senate in behalf of agriculture.

Altogether this was a highly gratifying and auspicious meeting, exhibiting, in a marked manner, not only the interest which is felt in every section of the country for a union of effort in behalf of agriculture, but of the elevated intelligence of those who there came together for a common purpose.

"Before closing this brief sketch, we desire to express our satisfaction with the able manner in which Col. WILDER — who was unanimously re-elected President — discharged the duties of his post. No similar officer, in either house of Congress, within our knowledge, has shown a superior ability.

Double white flowering Almond.

Double crimson flowering Peach.

UNIV. OF MICH.

THE VILLA MANSION.